
Chapter 9 — ISDN Feature Implementation

Overview

This chapter provides detailed information on the implementation of ISDN related features. The programming information provided is based on the assumption that the basic PRI/ISL installation and programming has been completed and is functional. If this is not the case, see the appropriate chapters in this manual.

Configuring applications and features

Procedures are provided in for configuring the following applications and features:

- Attendant and Network Wide Remote Call Forward
- Attendant Blocking of DN
- B-Channel Overload Control
- Backup D-Channel
- Call Forward, Break-In and Hunt Internal or External Network Wide
- Call Page Network Wide
- Call Park Network Wide
- Call Pickup Network Wide
- Calling Line Identification (CLID and CLID in CDR)
- Calling Party Privacy
- Display of Calling Party Denied

- E.164./ESN Numbering Plan Expansion
- Electronic Lock Network Wide/Electronic Lock on Private Lines
- Error Handling on ISL Analog and E&M TIE Trunks
- Flexible Numbering Plan Enhancement
- Incoming Trunk Programmable CLID
- International 1.5/2 Mb/s Gateway
- ISDN Calling Line Identification Enhancements
- ISDN QSIG Basic Call
- ISDN QSIG Call Completion
- ISDN QSIG Call Diversion Notification
- ISDN QSIG Generic Functional Transport
- ISDN QSIG Name Display
- ISDN QSIG Call Path Replacement
- ISDN Signaling Link
- Meridian Mail Trunk Access Restriction
- Message Waiting Indication (MWI) Interworking
- National ISDN-2 TR-1268 PRI
- Network Attendant Service
- Network Call Party Name Display (NCPND) and Network Name Delivery (NND)
- Network Call Redirection
- Network Intercom
- Network Wide Listed Directory Number
- Network Message Services
- Network Ring Again (NRAG)
- NI-2 Call By Call Service Selection
- NPI and TON in CDR Tickets

- Remote Virtual Queuing (RVQ)
- Trunk Anti-Tromboning
- Trunk to Trunk Connection
- Virtual Network Services
- Virtual Network Services Virtual Directory Number Expansion

Network ACD is treated separately in other Northern Telecom Practices.

Features not listed above do not require additional ISDN programming to be implemented and are part of the basic PRI and/or ISL operation (such as Basic Call Service, 64 KBPS Clear Data Transport). Additionally, the ESN software programming is assumed to be in place. This programming is covered in Appendix A.

Attendant and Network Wide Remote Call Forward

Set-based Configuration

LD 15 – Set the Station Control Password Length.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CDB FFC_DATA	Customer data block. Release 21 gate opener
CUST	0-31	Customer number.
...		
-SCPL	0-8	Station Control Password Length (must be consistent network wide).
...		

LD 15 – Configure a Special Prefix Number (SPRE) for the customer.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CDB FTR_DATA	Customer data block. Release 21 gate opener.
CUST	0-31	Customer number.
...		
- SPRE	xxxx	Special Prefix Number.
...		

LD 10 – Set the Station Control Password and allow Call Forward.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	500	Telephone type.
TN	c u	Card, and unit (Option 11).
SCPW	xxxxxxx	Station Control Password (0 to 8 digits, defined in LD 15).
KEY	xx CFW 4-(16)-23	Assign Call Forward key (xx) and set the forwarding DN length.

LD 11 – Set the Station Control Password and allow Call Forward.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	aaaa	Telephone type, where aaaa = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616, or 3000.
TN	c u	Card, and unit (Option 11).
SCPW	xxxxxxx	Station Control Password (0 to 8 digits, defined in LD 15).
KEY	xx CFW 4-(16)-23	Assign Call Forward key (xx) and set the forwarding DN length.

LD 57 – Define Remote Call Forward FFCs and set FFCT.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	FFC	Flexible Feature Codes.
CUST	0-31	Customer number.
FFCT	(NO), YES	Confirmation tone is (is not) to be given after an FFC.
CODE	RCFA	Remote Call Forward Activate.
RCFA	xx	xx = RCFA code.
CODE	RCFD	Remote Call Forward Deactivate.
RCFD	xx	xx = RCFD code.
CODE	RCFV	Remote Call Forward Verify.
RCFV	xx	xx = RCFV code.

Attendant-based Configuration

LD 12 – A new Flexible Attendant feature key, RFW, has been added to this overlay. Configuration of the key on the Attendant Console is required to allow attendant access to the RCFW feature. Configuration of the RFW key is only allowed if the ARFW package is equipped.

Prompt	Response	Description
REQ	NEW,CHG	New, or change.
TYPE	ATT, 1250, 2250	Attendant type – the RFW key can be configured on QCW4, M1250, and M2250 Attendant Consoles.
TN	c u	Card, and unit.
...		
KEY	xx RFW	Key number assigned as Attendant Remote Call Forward key.

LD 15 – Configure the Attendant RCFW password.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CDB ATT_DATA	Customer data block. Release 21 gate opener.
CUST	0-31	Customer number.
...		
- IRFR	(NO), YES	Internal Remote Call Forward Password required.
-- IRFP	xxxxxxx	Internal RCFW Password (only prompted if the response to IRFR is YES). The password length is one to eight digits; the password is numeric only.
- XRFR	(NO), YES	External Remote Call Forward Password required.
-- XRFP	xxxxxxx	External RCFW password (only prompted if the response to XRFR is YES). The password length is one to eight digits; the password is numeric only.
...		

Attendant Blocking of DN

LD 12 – Configure the SACP key on the Attendant Console.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	ATT, 1250, 2250	Attendant Console type.
TN	c u	Terminal Number for the Option 11.
...		
KEY	xx SACP	Semi-automatic Camp-on key.

LD 15 – Enable the Attendant Blocking of DN feature.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CDB ATT_DATA	Customer Data Block. Release 21 gate opener.
CUST	0-31	Customer number.
...		
ATT	YES	Change Attendant Console options.
...		
- SACP	(NO), ALL, SNGL	Semi-automatic Camp-on not allowed. Semi-automatic Camp-on for all Camp-on occurrences. Semi-automatic Camp-on an a per call basis.
- ABDN	(NO), YES	Activation of the Attendant Blocking of DN feature is (not) allowed. The ABDN prompt only appears when the SACP package is equipped.

B-Channel Overload Control

LD 16 – Configure the B-Channel Overload Control timer (in response to the BCOT prompt).

Prompt	Response	Description
REQ	NEW CHG	Add new data Change existing data.
TYPE	RDB	Route Data Block.
...		
ISDN	YES	Integrated Services Digital Network.
...		
- IFC		Supported interface types.
	D100 D250 S100 ESS4 ESS5 NI2	D100 = DMS-100 D250 = DMS-250 S100 = SL100 ESS4 = Lucent 4ESS ESS5 = Lucent E5SS NI2 = National ISDN-2
...		
-- BCOT	(0)-4000	The value for the B-Channel Control timer, in milliseconds. This value indicates the delay that the Meridian 1 will impose on a B-Channel before starting the disconnect sequence. A value of 256 is recommended. The entered value is rounded down to multiples of 128. After a value has been entered and rounded down (if necessary), the (rounded down) value is autoprinted on the screen before the next prompt is displayed. Note: In the case of Integrated Services Access (ISA) Call By Call Type and NI-2 Call By Call Service Selection, BCOT is prompted only for Service Routes.
....		

Backup D-Channel

Use this procedure to configure Backup D-Channel on an Option 11 system.

Restrictions and limitations

Once the backup D-Channel is configured, you must recover the primary D-Channel in the last part of the prompt-response sequence below. The following paragraphs explain the significance of either possible response in that sequence.

Recovery to primary D-Channel

It is important to understand the impact of the RCVF prompt. The following chart describes the scenarios possible when RCVF is YES and when RCVF is NO.

RCVF = YES	RCVF = NO
primary D-channel up-- active backup D-channel up	primary D-channel up-- active backup D-channel up
primary D-channel down backup D-channel-- active See below	primary D-channel down backup D-channel-- active See below
primary D-channel up-- active backup D-channel up	primary D-channel up backup D-channel up-- active

Two of the above scenarios are of particular interest.

- a When RCVP is YES, the primary D-Channel is down, and the backup D-Channel is up, the following occurs: first the system tries to re-establish the primary D-Channel connection. If this cannot be done successfully, then the backup D-Channel is switched to off. When the primary D-Channel is brought up again, the primary D-Channel becomes the active D-Channel.
- b When RCVP is NO, the primary D-Channel is down, and the primary D-Channel is brought up, the backup D-Channel remains active. It is important to note that the backup D channel remains the active D-Channel.

When connecting to a DMS-100 it is recommended that RCVP = NO.

Programming procedure

This procedure contains one major step:

- Configure the backup D-Channel and activate the recovery to primary D-Channel. Use LD17 and perform one of the following procedures depending on your software version.

Prior to X11 release 18

Follow this procedure and use LD 17 to configure the backup D-channel for prior to X11 release 18 software.

Prompt	Response	Description
BCHI	1-15	backup DCHI port number
BCHL	1-9	backup DCHI loop number
CDNO	C	Slot number of the circuit card which supports the BCHI port
RCVP	YES (NO)	Recovery to Primary D-Channel option. When RCVP is YES, the primary D-Channel becomes the active D-Channel. Defining this prompt has to be coordinated with the far end. Both sides either have to be YES or NO. If the two sides do not match, both sides default to NO.

X11 release 18 and later

Follow this procedure and use LD17 to configure the backup D-channel for X11 release 18 and later

Prompt	Response	Description
REQ	CHG	Change
TYPE	CFN	Configuration Record
ADAN	NEW BDCH 0-63	Add a backup D-channel (also CHG, MOV, and OUT BDCH)
PDCH	0-63	Primary D-channel
CTYP	DCHI	Card type
_PORT	0-3	Port number on MSDL card
USR	PRI, ISLD, SHA	D-channel mode
_ISLM	1-382	Prompted if USR is ISLD or SHA. Number of ISL trunks controlled by the D-Channel
DCHL	0, 2, 4,...9	PRI loop number for DCHI
OTBF	1-(32)-127	Number of output request buffers
_BPS	xxxx	Baud rate for ISL D-channel on MSDL port (default 64000)
_PARM	R232,(R422) DCE, (DTE)	ISL D-channel interface and transmission mode (MSDL port only)
BCHL	0,2,4,...9	PRI loop number for back-up D-channel
RCVP	Yes, (No)	Auto-recovery to primary D-channel option
ADAN	<cr>,****	Go on to next prompt or exit overlay

Call Forward, Break-In and Hunt Internal or External Network Wide

Feature implementation

LD 15 – Define Network Wide definition of Internal/External Calls in Customer Data Block.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	FTR	Customer Features and options.
CUST	0-31	Customer number.
- IDEF	YES	Network-wide internal or external definition for Call Forward/Hunt by Call Type, Internal Call Forward and Break-In Indication Prevention. Calls will be treated as internal or external according to the network-wide definition. NO = call will be treated as internal or external as it was previously programmed.

LD 16 – Modify Route Data Block to Define Internal/External Calls.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	RDB	Route data block.
CUST	0-31	Customer number.
ROUT	0-511	Route number.
...		
RCLS	(EXT), INT	Route Class marked as External or Internal.

IDEF	(NET), LOC	Internal/External Definition. If NET is entered, any call over the selected route will receive network treatment according to available network information. If LOC is entered, the route class of the selected route will supercede any other information. A call over this route will receive internal treatment if the route class is set to internal, otherwise it will receive external.
Note: The prompt IDEF will output only if IDEF = YES in the Customer Data Block. If IDEF = NO, any information that was entered previously at the IDEF prompt will not influence the treatment received by a call.		

Call Page Network Wide

Feature implementation

LD 16 – Configuring Paging Route.

Prompt	Response	Description
REQ	NEW	New.
TYPE	RDB	Route data block.
CUST	0-31	Customer Number associated with route.
...		
TKTP	PAG	Paging Route.
NACC	(PGNR)	Call Page Network Wide Restricted (default). PGNC = Call Page Network Wide controlled (ISDN only) PGNU = Call Page Network Wide uncontrolled (PGNU is equivalent to ISDN/Analog media.)
ICOG	OGT	Outgoing trunk.
TARG	1-15	Trunk Access Restriction Group.

LD 14 – Paging Trunk Configuration.

Prompt	Response	Description
REQ	NEW	New.
TYPE	PAG	Trunk type.
TN	c u	Terminal number.
RTMB	0 - 511 1- 254	Route number, Member number.

LD 10 – Assign Class of Service to Analog (500/2500 type) telephones.

Prompt	Response	Description
REQ	NEW, CHG	New, or Change.
TYPE	500	Type telephone.
...		
CLS	PGNA	Call Page Network Wide Allowed. (PGND) = Call Page Network Wide Denied (default).

LD 11 – Assign Class of Service to Meridian 1 Proprietary Telephones.

Prompt	Response	Description
REQ	NEW, CHG	New, or Change.
TYPE	xxxx	Telephone type, where xxxx= SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616, or 3000.
...		
CLS	PGNA	Call Page Network Wide Allowed. (PGND) = Call Page Network Wide Denied (default).

LD 27 – Assign Class of Service to ISDN BRI sets.

Prompt	Response	Description
REQ	NEW, CHG	New, or Change.
TYPE	DSL	Type of data block.
DSL	l s c dsl	Digital Subscriber Loop address.
CLS	PGNA	Call Page Network Wide Allowed. (PGND) = Call Page Network Wide Denied (default).

LD 17 – D-channel Message Configuration.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	ADAN	Input or Output Devices.
ADAN	CHG DCH x	Change D-channel.
- CTYP	MSDL DCHI	The NTBK51BA D-Channel Daughterboard with PRA. The NTBK51BA D-Channel Daughterboard with ISL/VNS.
RCAP	NAC	Remote capability where: NAC= Class of Service data. XNAC = removes Class of Service as a remote capability (default).

Call Park Network Wide

Feature implementation

LD 15 – Enable Call Park Network Wide.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	FTR	Customer Features and options.
CUST	0-31	Customer number.
- OPT	CPN	Enable Call Park Network Wide. CPA = Enables Call Park. CPD = Disables Call Park (default).

LD 50 – Add/Change Customer Call Park Data.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	CPK	Call Park data block.
CUST	0-31	Customer number.
BLOC	1-5	Call Park data block number. Primary Call Park (block 1) must be defined for Call Park operation. Block 1 must be initially defined before attempting to remove.
CPTM	30-(45)-480	Call Park Timer (in seconds).
RECA	(NO), YES	Call Park Recall to Attendant.
SPDN	(0)-100 xx...x	Number of contiguous system park DNs and first DN.
MURT	0-511	Music Route number for parked call.

LD 10 – Enable Call Park for Analog (500/2500 type) telephones.

Prompt	Response	Description
REQ	NEW, CHG	New, or Change.
TYPE	500	Telephone type.
TN	c u	Terminal Number.
CLS	XFA	Call Transfer Allowed. XFD = Call Transfer Denied.

LD 11 – Add/Change Call Park Key on Meridian 1 proprietary telephones.

Prompt	Response	Description
REQ	NEW, CHG	New, or Change.
TYPE	xxxx	Telephone type where: aaaa = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616 or 3000.
TN	c u	Terminal Number.
KEY	xx PRK xx TRN xx AO3 xxAO6	Key assignment for Call Park. Key number, Transfer. Three Party Conference. Six Party Conference.

LD 12 – Add/Change Call Park Key on Attendant Consoles.

Prompt	Response	Description
REQ	NEW, CHG	New, or Change.
TYPE	xxxx	Console type.
TN	c u	Terminal Number
KEY	xx PRK	Key number, Call Park.

LD 17 – D-channel Message Configuration.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	ADAN	Input or Output Devices.
ADAN	CHG DCH x	Change D-channel.
...		
RCAP	CPK	Remote capability. CPK = enable Network Call Park. XCPK = disable Network Call Park.
...		

Call Pickup Network Wide

Use the following procedure to configure Call Pickup Network Wide.

Note: minimum software vintage of Generic X11 Release 21 in order for Call Pickup Network Wide to be functional. The software Release ID is defined in LD 17.

LD 10 – Assign a Ringing Pickup Group number to an analog (500/2500 type) telephone, and define with the Class of Service which of the Call Pickup features are allowed to be activated from this station.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	500	Telephone type.
TN	c u	Terminal Number for the Option 11.
...		
RNPG	(0)-4095	Ringing Number Pickup Group (RNPG). If the RNPG is set to 0 (the default) on a station, it is not possible to pick up any call ringing this station from any other set. Enter 0 to remove a station from the RNPG. Note: If the RPNG is two or more digits in length, it must be configured in the Customer Data Block (LD 15), so that it may use the Group Pickup key. See the procedure which follows LD 11.
...		
CLS	(PUD), PUA	Ringing Number Pickup (denied) allowed.
	(DPUD), DPUA	DN pickup (denied) allowed.
	(GPUD), GPU A	Group pickup (denied) allowed.

LD 11 – Assign a pickup group to a Meridian 1 proprietary telephone. Define with the Class of Service which of the Call Pickup features are allowed to be activated from this station.

The configuring of different pickup keys is optional, since the Call Pickup and Directed Call Pickup features can be activated by dialing the SPRE + xx or by dialing a Flexible Feature Code. The Digit Display key is needed for the Display Call Pickup feature.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	aaaa	Telephone type, where: aaaa = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616, and 3000.
TN	c u	Terminal Number for the Option 11.
...		
RNPG	(0)-4095	Ringing Number Pickup Group (RNPG). If the RNPG is set to 0 (the default) on a station, it is not possible to pick up any call ringing this station from any other set. Enter 0 to remove a station from the RNPG. Note: If the RPNG is two or more digits in length, it must be configured in the Customer Data Block (LD 15), so that it may use the Group Pickup key. See the procedure which follows.
...		
CLS	(PUD), PUA	Ringing Number Pickup (denied) allowed.
	(DPUD), DPUA	DN pickup (denied) allowed.
	(GPUD), GPUA	Group pickup (denied) allowed.
...		
KEY	xx RNP yyyy	Key number, Ringing Number Pickup, Pickup Group number (optional). If the Group number is not entered, the key will pick up calls in the group assigned to the station. If the Group number is entered, the key will pick up calls in the specified group yyyy.

KEY	xx GPU	Key number, Group Number Pickup.
KEY	xx DPU	Key number, DN Pickup.
...		
KEY	xx DSP	Key number, Digit Display.

LD 15 - If the customer's Ringing Number Pickup Group is two or more digits in length (as configured in LD10/11, in response to the RNPG prompt), it must be configured in the Customer Data Block (in response to the PKND prompt); otherwise the Group Pickup key cannot be used by the group.

Prompt	Response	Comment
REQ:	CHG	Change existing data block
TYPE:	FTR	Customer Features and options
CUST	0-31	Customer number
- OPT	aaa	Options
- DGRP	(0)-2046	Maximum number of Dial Intercom Groups
- IRNG	(NO) YES	Intercom Ring
- PKND	(1)-4	Number of digits Dialed for Group Pickup
...		

LD 57 – Define the Flexible Feature Codes (FFCs) used to activate Call Pickup and Directed Call Pickup from a an analog (500/2500 type) telephone. The FFCs may also be used on Meridian 1 proprietary telephone sets.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	FFC	Flexible Feature Code.
CUST	0-31	Customer number.
...		

CODE	mmmm	Specific FFC type.
- PURN	xxxx	Pickup Ringing Number code.
- PUGR	xxxx	Pickup Group code.
- PUDN	xxxx	Pickup DN code.

LD 18 – Configure a Speed Call List. This Speed Call List will be used by a Ringing Number Pickup Group (RNPG) or a set of RNPGs as a search list to scan the MCDN network.

The Speed Call List entries should contain digits which can be used to route a network Call Pickup request to a remote node (e.g., mainly the ISDN PINX DNs of the remote nodes which will be scanned after a network Call Pickup request). There must be no gaps in the Speed Call List (i.e., each Speed Call List entry should be present).

Due to the time it takes to scan the remote node, it is strongly recommended to configure less than six entries in the Speed Call List.

Prompt	Response	Description
REQ	NEW, CHG, OUT	New, change, or remove.
TYPE	SCL	Speed Call List.
LSNO	0-8190	Speed Call List number
...		
DNSZ	4-(16)-31	Maximum size of DNs allowed for Speed Call list.
SIZE	1-1000	Maximum number of DNs allowed in Speed Call list. Note: The size cannot be greater than the value entered against the STOR prompt below.
...		
STOR	000-319 xxxx	Speed Call List entry number and digits (PINX DN) stored against it. Note: The STOR entry cannot be blank.

LD 18 – On a per customer basis, define the Ringing Number Pickup Groups that are network wide by linking them to one of the previous defined Speed Call Lists. Different RNPGs may be linked to different Speed Call Lists.

Prompt	Response	Description
REQ	NEW, CHG, OUT	New, change, or remove.
TYPE	CPNW	Call Pickup Network Wide data.
CUST	0-31	Customer number.
LSNO	0-8190	A Speed Call List associated with Call Pickup network wide groups.
- GRP	0-4095 X0-4095	Ringing Number Pickup Group (RNPG) using this Speed Call List. Repeat for all groups sharing the same list. Enter <CR> to reprompt LSNO. Enter X to remove an RNPG.

LD 17 – Define the software Release ID at the far end of the D-Channel. Both the target and destination switches must be equipped with a minimum software vintage of Generic X11 Release 21 in order for Call Pickup Network Wide to be functional.

Prompt	Response	Description
REQ	CHG	Change I/O device.
TYPE	ADAN	Action Device And Number.
...		
- RLS	21	Release ID of the switch at the far end of the D-channel. Note: Both the target and destination switches must be equipped with a minimum software vintage of Release 21.
...		

LD 15 – Define the customer's Private Integrated Network Identifier (PNI) and Private Integrated Services Network Exchange (PINX) DN.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	NET	Networking data.
CUST	0-31	Customer number.
...		
ISDN	YES	Allow ISDN for this customer.
- PNI	1-32700	Define the Private Network Identifier.
- PINX_DN	xx...x	Node DN, up to seven digits with DN Expansion package 150.
	X	Enter X to remove.

LD 15 – Define the special prefix code (SPRE) to be able to activate the Call Pickup features by dialing SPRE + xx.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	FTR	Customer Features and options
CUST	0-31	Customer number.
...		
- SPRE	xxxx	Special Prefix number for this customer.
...		

LD 16 – Configure the PNI on the route. This PNI must correspond to the one configured in LD 15 on the target (remote) node.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	RDB	Route data block.
ROUT	0-511	Route number.
...		
ISDN	YES	ISDN is allowed on this route.
- PNI	1-32700	Define the Private Network Identifier.

Calling Line Identification (CLID)

Use this procedure to configure Calling Line Identification on an Option 11 system.

Restrictions and limitations

Basic PRI or ISL administration must be performed before CLID is defined

The calling line ID for a private-type call over a TIE route is always the set's prime DN, regardless of the customer data block and sets program. If CDB CNTP = LDN, then LDN is sent for all sets. If CDB CNTP = PDN then either PDN or LDN is sent depending on COS assigned to the sets. For explanation, see the Option 11 software guide.

Programming procedure

This procedure contains three major steps:

- 1 Allow CLID in CDR. Use LD17.
- 2 Select default class of service for sets, for calling number type to be sent for CLID. Use LD15.
- 3 Configure set's display number differently than the class of service in LD15 (CNTP). Use LD10 / LD11.

Step 1

Allow CLID in CDR. Use LD17.

Prompt	Response	Description
CLID	YES,(NO)	Enable CLID in CDR. This prompt will only appear if the response to the CDR prompt in LD15 is YES.

Step 2

Select default class of service for sets, for calling number type to be sent for CLID. Use LD15.

Prompt	Response	Description
CNTP		Calling no. type
	(PDN)	CLID display the set's Prime DN
	LDN	CLID display customer Listed DN

Step 3

Configure set's display number differently than the class of service in LD15 (CNTP). Use LD10 / LD11.

Prompt	Response	Description
REQ	NEW,CHG	
TYPE		set type as appropriate
TN	c u	terminal number address
CLS	(PDN)	the set's Prime Directory Number
	LDN	the customer's Listed Directory Number

Calling Party Privacy

LD 57 – Define the FFC for CPP Code.

Prompt	Response	Description
REQ	NEW, CHG	Add, or change.
TYPE	FFC	Flexible Feature Code.
CUST	0-31	Customer number.
FFCT	(NO), YES	Flexible Feature Confirmation Tone.
...		
CODE	CPP	FFC type to be altered. CPP entry is only allowed if the CPP package is equipped. <CR> means that no FFC types are prompted.
...		
CPP	(*67), nnnn	Calling Party Privacy code. CPP is prompted only if the CPP package is equipped. Any arbitrary digit sequence up to four digits can be specified. For Meridian 1 proprietary set, an “*” can be entered as the first digit. CPP will be prompted until a <CR> is entered.

LD 16 – Define Privacy Indicators.

Prompt	Response	Description
REQ	NEW, CHG	Add, or change.
TYPE	RDB	Route Data Block.
CUST	0-31	Customer number.
TKTP	COT, DID, FEX, WAT	Trunk Route Type.
...		
DTRK	YES	Digital trunk route.
DGTP	DTI	Digital trunk type.

ISDN	YES	ISDN PRI option.
...		
ACOD	nnnn	Trunk Access Code.
CPP	YES	Calling Party Privacy. YES = This trunk route is enabled for the recognition of the Calling Party Privacy feature. CPP is only prompted if the following conditions are met: the CPP package is equipped, the OPAO package is not equipped, OGT (outgoing) or IAO (incoming and outgoing) trunk, non ISDN option and trunk route type is COT/DID/FEX/WAT. The default value for the CPP prompt is NO.
TCPP	(NO), YES	CPP for an incoming trunk call tandemed to this trunk route. YES = An incoming non-ISDN trunk call tandemed to this trunk route will carry the Privacy Indicator. The default value for the TCPP is NO.
- DTPI	nnnn	Privacy Indicator for a digitone trunk. DTPI is prompted only if CPP is set to "YES" and the trunk route is non-ISDN. If CPP is changed from NO to YES, the default is *67. Any arbitrary digit sequence (0-9) up to four digits can be specified. An asterisk "*" is allowed to be the first digit only if the outgoing call goes to a Public Network.
- DPPI	nnnn	Privacy Indicator for a dial pulse trunk. DPPI is prompted only if CPP is set to "YES" and the trunk route is non-ISDN. If CPP is changed from NO to YES, the default is 1167. Any arbitrary digit sequence (0-9) up to four digits can be specified.
- PII	(NO) YES	Calling Party Privacy Indicator is honored. Calling Party Privacy Indicator is ignored. PII is prompted with X11 Release 23 and later. Note: PII is only prompted when the CPP package is equipped; the trunk route type is COT, DID, FEX, or WAT; the ISDN option is set to YES; the ISDN Interface (IFC) is D100, D250, ESS4, ESS5, or NI2; and the route is Incoming and Outgoing (IAO) or Incoming Only Trunk (ICT).

LD 10/11 – Activate Calling Party per-line blocking.

Prompt	Response	Description
REQ	NEW, CHG	Add, or change.
TYPE	nnnn	Type of telephone.
TN	c u	Terminal Number.
...		
CLS	CLBA	Activate Calling Party per-line blocking. Enter CLBD to deactivate Calling Party per-line blocking. CLBD is the default.

Display of Calling Party Denied**Feature implementation**

LD 10 – Allow Directory Number Display and Name Display for Analog (500/2500) type sets.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	500	500/2500 type set data block.
TN	c u	Terminal Number.
...		
CLS	DDGA	Directory Number Display Allowed (default). DDGD = Directory Number Display Denied.
CLS	NAMA	Name Display Allowed (default). NAMD = Name Display Denied.

LD 11 – Allow Directory Number Display and Name Display for Meridian 1 proprietary sets.

Prompt	Response	Description
REQ	CHG.	Change.
TYPE	xxxx	Telephone type, where: xxxx = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616 or 3000.
TN	c u	Terminal Number
...		
CLS	DDGA	Directory Number Display Allowed (default). DDGD = Directory Number Display Denied.
CLS	NAMA	Name Display Allowed (default). NAMD = Name Display Denied.

E.164/ESN Numbering Plan Expansion

Feature implementation

The following steps are used to configure the E.164/ESN Numbering Plan Expansion enhancements:

- In LD 10, for analog (500/2500 type) sets, configure the expansion pertaining to the maximum length of Autodial, Call Forward All Calls, Default Call Forward (for Phantom TNs), and Internal Call Forward DNs;
- In LD 11, for Meridian 1 proprietary sets, configure the expansion pertaining to the maximum length of Autodial, Conference-Autodial, Call Forward All Calls, and Internal Call Forward DNs;
- In LD 12, for attendant consoles, configure the expansion pertaining to the maximum length of the Autodial DN;
- In LD 15, configure the expansion pertaining to the maximum length of the Customer Call Forward DN;
- In LD 23, configure the expansion pertaining to the maximum length of the ACD Night Call Forward DN and the ACD Interflow DN;
- In LD 86, for the ESN data block, configure the expansion pertaining to the maximum number of Digit Manipulation tables, and maximum number of Supplemental Digit Restriction and Recognition blocks;
- In LD 86, for the Digit Manipulation data block, configure the expansion pertaining to the maximum number of leading digits to be deleted and inserted;
- In LD 87, for a Free Special Number Screening Index, configure the expansion pertaining to the maximum number of Special Numbers to be screened;
- In LD 87, for a Trunk Steering Code, configure the expansion pertaining to the maximum number of Flexible Numbers;

- In LD 90, for Network Translation tables, configure the expansion pertaining to the maximum number of Special Numbers digits, the maximum number of digits for Flexible Numbers, the maximum number of Supplemental Digit Restriction and Recognition digits per entry, and the addition of “allow” as a new Supplemental Digit Restriction and Recognition type.

LD 10 — For analog (500/2500 type) sets, configure the expansion pertaining to the Autodial, Call Forward All Calls, Default Call Forward (for Phantom TNs), and Internal Call Forward DN.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
TYPE	500	Type of telephone set.
TN	c u	Card and unit.
...		
FTR		Special features for telephone sets.
	CFW (4)-31	Enter the maximum number of digits in the Call Forward All Calls DN. Note that there is no default value.
	DCFW ll xxx...x	Enter the maximum number of digits in the Default Call Forward DN for a Phantom DN. ll = 4,8,12,16,20,24,28,31 (entries are rounded up to the next valid length.) xx...x = the Default Call Forward All Calls DN.
	ICF (4)-31	Enter the maximum number of digits in the Internal Call Forward DN for a Phantom DN.
	...	

LD 11 – For Meridian 1 proprietary sets, configure the expansion pertaining to the Autodial, Call Forward All Calls, Default Call Forward (for Phantom TNs), and Internal Call Forward DN.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
TYPE	xxxx	Type of telephone set. xxxx = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2116, 2317, 2616, M3000.
TN	c u	Card and unit.
KEY		Telephone function key assignments.
	nn ADL ll xxx...x	Enter the maximum number of Autodial digits that may be stored. nn = Key number ll = 4,8,12,(16),20,24,28,31,NUL (for M3000 sets, the accepted range is (4)-28) Entries are rounded up to the next valid length. An entry of NUL will disable the Autodial feature xx...x = the Autodial target DN (this is an optional entry.)
	nn CA ll xxx...x	Enter the maximum number of digits that may be stored for the combined Conference-Autodial DN. nn = Key number ll = 4,8,12,(16),20,24,28,31 (entries are rounded up to the next valid length.) xx...x = the Conference-Autodial target DN (this is an optional entry.)
	nn CFW ll xxx...x	Enter the maximum number of digits that may be stored for the Call Forward All Calls DN. nn = Key number ll = (4)-31 (for M2317 and M3000 sets, the accepted range is (4)-23) xx...x = the Call Forward All Calls DN (this is an optional entry.)
	nn ICF ll xx...x	Enter the maximum number of digits that may be stored for the Internal Call Forward DN. nn = Key number ll = (4)-31 xx...x = the Internal Call Forward DN (this is an optional entry.)

LD 12 – For attendant consoles, configure the expansion pertaining to the maximum length of the Autodial DN.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
TYPE	xxxx	Type of attendant console xxxx = 1250, 2250.
TN	c u	Card and unit.
KEY	nn ADL xxx...x	Attendant console function key assignments. Enter the maximum number of Autodial digits that may be stored. nn = Key number xxx...x = the Autodial DN, up to 31 digits (this is an optional entry.)
	...	

LD 15 - Configure the expansion pertaining to the Customer Call Forward DN.

Prompt	Response	Description
REQ:	NEW, CHG	Add new data, or change existing data.
TYPE	RDR	Redirection data.
CUST	0-31	Customer Number.
...		
- CCFWDN	xxx...x X	Enter the Customer Call Forward DN, up to 23 digits (this entry is made for a new CCFWDN, or if the length of an existing CCFWDN has been expanded.) Enter X for no entry.
...		

LD 23 - Configure the expansion pertaining to the ACD Night Call Forward DN and the ACD Interflow DN.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
TYPE	RDR	Call Detail Recording data.
CUST	0-31	Customer Number.
ACDN	xxx...x	ACD DN.
...		
NCFW	xxx...x	Enter the ACD Night Forward DN, up to 31 digits (this entry is made for a new Night Forward DN, or if the length of an existing Night Forward DN has been expanded.)
...		
IFDN	xxx...x	Enter the ACD Interflow DN, up to 31 digits (this entry is made for a new Interflow DN, or if the length of an existing Interflow DN has been expanded.)

LD 86 - For the ESN data block, configure the expansion pertaining to the maximum number of Supplemental Digit Restriction and Recognition blocks, and the maximum number of Digit Manipulation tables.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
CUST	0-31	Customer Number.
FEAT	ESN	ESN data block feature.
...		
MXSD	(0)-1500	Enter the maximum number of Supplemental Digit Restriction and Recognition (SDRR) blocks, for BARS or NARS. Enter 0 (the default) if no SDRR blocks are required.
...		

MXDM	(0)-1000 (0)-256 (0)-32	Enter the maximum number of Digit Manipulation tables. (0)-1000 = for Flexible Numbering Plan (0)-256 = for BARS/NARS (0)-32 = for Coordinated Dialing Plan Enter 0 (the default) if no Digit Manipulation tables are required.
...		

LD 86 - For the Digit Manipulation data block, configure the expansion pertaining to the maximum number of leading digits to be deleted and inserted.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
CUST	0-31	Customer Number.
FEAT	DGT	Digit Manipulation data block feature.
...		
DMI	1-999 1-255 1-31	Enter the Digit Manipulation table. 1-999 = for Flexible Numbering Plan 1-255 = for BARS/NARS 1-31 = for Coordinated Dialing Plan. The maximum number of Digit Manipulation tables is defined using prompt MXDM, in the ESN data block.
DEL	(0)-19	Enter the number of leading digits to be deleted. Enter 0 (the default) for none.
INST	x...x x...x*y...y X	Enter the number of leading digits to be inserted. x...x = 1-31 x...x*y...y = for Special Common Carriers (SCCs), 1-30, including access number (x...x), delimiter (*), and authorization code (y...y) Enter X for none.
...		

LD 87 - For a Free Special Number Screening Index, configure the expansion pertaining to the maximum number of Special Numbers to be screened.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
CUST	0-31	Customer Number.
FEAT	FSNS	Free Special Number Screening.
FSNI	1-255	Free Special Number Screening Index.
SPN	1-19	Special Number to be screened.
...		

LD 87 - For a Trunk Steering Code, configure the expansion pertaining to the maximum number of Flexible Numbers.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
CUST	0-31	Customer Number.
FEAT	CDP	Coordinated Dialing Plan.
TYPE	TSC	Trunk Steering Code.
TSC	1-7	Trunk Steering Code.
- FLEN	0-24	Flexible Number.
...		

LD 90 - For Network Translation tables, configure the expansion pertaining to the maximum number of Special Numbers digits, the maximum number of digits for Flexible Numbers, the maximum number of Supplemental Digit Restriction and Recognition digits per entry, and the addition of “allow” (ALLOW) as a new Supplemental Digit Restriction and Recognition type.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
CUST	0-31	Customer Number.
FEAT	NET	Network Translation Tables data.
...		
TYPE	SPN	Special Number Translation.
SPN	xxxx xxxx x...x	Enter the Special Number Translation digits. Up to 19 digits may be entered. The SPN digits must be entered in groups of at most four digits, separated by a space. Up to five groups can be entered. The restriction is removed of allowing one less digit if the first digit of a digit string is not “1”.
- FLEN	(0)-24	Enter the number of Flexible Digits (the number of digits that the system expects to receive before accessing a trunk, and outpulsing the digits.)
...		
- SDRR	DENY LDID LDDD DID DDD ITED ARRN STRK ALLOW	Type of Supplemental Digit Restriction and Recognition. DENY = restricted codes LDID = recognized local DID codes LDDD = recognized local DDD codes DID = recognize remote DID codes DDD = recognize remote DDD codes ITED = incoming trunk group exclusion digits ARRN = alternate routing remote number STRK = allowed codes for ADM/MDM ALLOW = allowed codes

		The maximum number of digits entered in response to the DENY, LDID, LDDD, DID, DDD, and ALLOW prompts, which follow, must be lesser than 10, or 7-m (8-m for 1+ dialing) for Central Office translation data (NXX), 10-m (11-m for 1= dialing) for Numbering Plan Area Code translation data (NPA), or 19-m for Special Numbers Translation data (SPN), where m = the number of digits entered for the prompt NXX, NPA, or SPN. These numbers are no longer required to be leftwise unique. For non leftwise unique numbers, the longer number takes precedence over the shorter number. However, the exact same numbers (non leftwise unique and the same length) are still blocked.
-- DENY	x...x	Restricted number to be denied.
-- LDID	x...x	Local DID number to be recognized.
-- LDDD	x...x	Local DDD number to be recognized.
-- DID	x...x	Remote DID number to be recognized.
-- DDD	x...x	Remote DDD number to be recognized.
-- ALLOW	x...x	Code to be allowed.

Electronic Lock Network Wide/Electronic Lock on Private Lines

Electronic Lock Network Wide

Use the following overlays to implement Electronic Lock Network Wide.

LD 15 – Modify Customer Data Block for Controlled Class of Service data as follows

Prompt	Response	Description
REQ:	CHG	Change existing data block.
TYPE:	CCS	Controlled Class of Service data.
CUST	0-31	Customer number.
- CCRS	aaa	Controlled class of service (CCOS) Restricted Service.
- ECC1	aaa	Enhanced Controlled Class of Service level 1.
- ECC2	aaa	Enhanced Controlled Class of Service level 2.
- CNCS	0-99	Network Controlled Class Of Service for Electronic Lock.
- PELK	YES (NO)	Enter YES for Electronic Lock on a private line; otherwise, enter NO.

LD 15 – Modify Customer Data Block for Flexible Feature Code data as follows:

Prompt	Response	Description
REQ:	CHG	Change existing data block.
TYPE:	FFC	Flexible Feature Code data.
CUST	0-31	Customer number.
- CCRS	aaa	Controlled class of service (CCOS) Restricted Service.
- SCPL	0-8	Station Control Password Length.
- SBUP	(YES) NO	Enable use of station control passwords for set based administration user level access

-- PWD2	xxxx	PWD2 password for confirmation
- FFCS	(NO) YES	Change Flexible Feature Code end-of-dialing indicator
-- STRL	1-3	String Length of end-of-dial indicator
-- STRG	xxx	String to indicate end-of-dialing
- ADLD	(0)-20	Auto Dial Delay in seconds
- SCPL	0-8	Station Control Password Length

LD 10 – Set the Station Control Password and Controlled Class of Service Allowed for each analog (500/2500 type) telephone.

Prompt	Response	Description
REQ	NEW,CHG	Add, Change.
TYPE	500	Telephone type.
CUST	0-31	Customer Number.
TN	c u	Card, and unit (Option 11).
SCPW	xxxxxxxx	Station Control Password (1 to 8 digits, as defined in LD 15).
CLS	CCSA	Controlled Class of Service Allowed.

LD 11 – Set the Station Control Password and Controlled Class of Service Allowed for each Meridian 1 proprietary telephone.

Prompt	Response	Description
REQ	NEW,CHG	Add, Change.
TYPE	aaaa	Telephone type, where aaaa = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616, or 3000.
CUST	0-31	Customer Number.
TN	c u	Card, and unit (Option 11).
SCPW	xxxxxxxx	Station Control Password (1 to 8 digits, as defined in LD 15).

CLS	CCSA	Controlled Class of Service Allowed.
-----	------	--------------------------------------

LD 57 – Configure the Flexible Feature Codes for Electronic Lock.

Prompt	Response	Description
REQ	NEW/CHG	Enter new/change data.
TYPE	FFC	Flexible Feature Codes.
CUST	0-31	Customer Number.
FFCT	YES	Provide FFC confirmation tone.
CODE	ELKA	New/change Electronic Lock Activate FFC.
ELKA	xxxx	Enter the new or changed Electronic Lock Activate FFC
ELKA	<cr>	
CODE	ELKD	New/change Electronic Lock Deactivate FFC.
ELKD	xxxx	Enter the new or changed Electronic Lock Deactivate FFC
ELKD	<cr>	

LD 87 – In the ESN 2 overlay, define all NCOS to be used.

Prompt	Response	Description
REQ	NEW/CHG	Enter new/change data.
CUST	0-31	Customer Number.
FEAT	NCTL	Network Control.
...		
NRNG	0-99	NCOS range.
NCOS	0-99	Network Class of Service group number.
...		
– FRL	(0)-7	Facility Restriction level.

Electronic Lock on Private Lines

Use the following overlays to implement Electronic Lock Network on Private Lines.

LD 15 – Modify Customer Data Block for Controlled Class of Service data as follows

Prompt	Response	Description
REQ:	CHG	Change existing data block.
TYPE:	CCS	Controlled Class of Service data.
CUST	0-31	Customer number.
- CCRS	aaa	Controlled class of service (CCOS) Restricted Service.
- ECC1	aaa	Enhanced Controlled Class of Service level 1.
- ECC2	aaa	Enhanced Controlled Class of Service level 2.
- CNCS	0-99	Network Controlled Class Of Service for Electronic Lock.
- PELK	YES	Electronic Lock on Private Lines.

LD 15 – Modify Customer Data Block for Flexible Feature Code data as follows

Prompt	Response	Description
REQ:	CHG	Change existing data block.
TYPE:	FFC	Flexible Feature Code data.
CUST	0-31	Customer number.
- CCRS	aaa	Controlled class of service (CCOS) Restricted Service.
- SCPL	0-8	Station Control Password Length.
- SBUP	(YES) NO	Enable use of station control passwords for set based administration user level access
-- PWD2	xxxx	PWD2 password for confirmation

- FFCS	(NO) YES	Change Flexible Feature Code end-of-dialing indicator
-- STRL	1-3	String Length of end-of-dial indicator
-- STRG	xxx	String to indicate end-of-dialing
- ADLD	(0)-20	Auto Dial Delay in seconds
- SCPL	0-8	Station Control Password Length

LD 16 – Set the Facility Restriction Level (FRL) number and the New Flexible Code Restriction (NFCR) tree number for private lines.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	RDB	Route Data Block.
...		
PRIV	YES	Private Line Route.
...		
FRL	0-7 0-254	Facility Restriction Level (FRL) and New Flexible Code Restriction (NFCR) tree number.

LD 10 – Set the Station Control Password and Controlled Class of Service Allowed for each analog (500/2500 type) telephone.

Prompt	Response	Description
REQ	NEW,CHG	Add, Change.
TYPE	500	Telephone type.
CUST	0-31	Customer number.
TN	c u	Card, and unit.
SCPW	xxxxxxx	Station Control Password (1 to 8 digits, as defined in LD 15).
CLS	CCSA	Controlled Class of Service Allowed.

LD 11 – Set the Station Control Password and Controlled Class of Service Allowed for each Meridian 1 proprietary telephone.

Prompt	Response	Description
REQ	NEW,CHG	Add, Change.
CUST	0-31	Customer number.
TYPE	aaaa	Telephone type, where aaaa = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616, or 3000.
TN	c u	Card, and unit.
SCPW	xxxxxxxx	Station Control Password (1 to 8 digits, as defined in LD 15).
CLS	CCSA	Controlled Class of Service Allowed.
...		
KEY	xx PVR yyyy(yyy)	Key number and DN for Private Line Ringing, where xx = the key number and yyyy(yyy) = the Private Line Ringing DN (up to four digits; up to seven digits if the Directory Number Expansion (DNXP) package 150 is equipped). Private Line Directory Number (PRDN) must be defined in LD 14.

Error Handling on ISDN Signaling Link Analog E&M TIE Trunks

LD 16 – Configure ISL on Analog Trunks.

Prompt	Response	Description
REQ	NEW, CHG	Add, or change.
TYPE	RDB	Route data block.
...		
DTRK	NO	Digital trunk route.
ISDN	YES	ISDN Primary Rate Interface option.
MODE	ISLD	Mode of D-channel controlling the route.
...		
FALT	YES	Enables the error handling and recognition of E lead error for ISL E&M Tie Trunks. If FALT= NO, then no error handling with occur.

Flexible Numbering Plan Enhancement

LD 15 – Enable/disable the Flexible Numbering Plan feature.

Prompt	Response	Description
REQ:	CHG	Change existing data.
TYPE:	NET	Networking data.
CUST	xx	Customer number.
...		
AC2	NPA NXX INTL SPN LOC	Access Code 2. E.164 National E.164 Subscriber International Special Number Location Code
FNP	YES	Enable the Flexible Numbering Plan feature (default).
ISDN	(NO) YES	ISDN option.
...		
VNR	(NO) YES	Vacant Number Routing enabled (disabled). VNR is only prompted when FNP = YES. When FNP = NO, VNR is automatically set to NO and is, therefore, restricted.
- RLI	0-999	Route List Index. Enter the route list, defined in LD 86, to be used by Vacant Number Routing.
- FLEN	1-(16)	Flexible length of digits expected.
- CDPL	1-(10)	Coordinated Dialing Plan Length. Enter the maximum number of Coordinated Dialing Plan (CDP) digits expected by Vacant Number Routing.
- LOCL	1-(10)	Location Code Length. Enter the maximum number of Location (LOC) digits expected by Vacant Number Routing.

Incoming Trunk Programmable Calling Line Identification

Use the following procedure to configure Incoming Trunk Programmable Calling Line Identification.

Procedure 1

Configure Electronic Lock Network Wide/Electronic Lock on Private Lines

Step	Overlay	Action
1	LD 16 Route Data Block	Configure incoming route.
2	LD 16 Route Data Block	Configure outgoing route.

Step 1 - Use **Overlay 16** to configure the incoming route.

Prompt	Response	Description
REQ	NEW, or CHG	New, or Change.
TYPE	RDB	Route data block.
...		
BILN	(NO), YES	Billing number (is not) is required.
BLN	1-(10)-16	Billing number length. The default is 10 digits.
BNUM	x...x	Billing number (1 to 16 digits).
BDSP	(NO), YES	(Do not) display Billing Number.

Step 2 - Use Overlay 16 to configure outgoing route.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	RDB	Route data block.
...		
ISDN	(NO), YES	ISDN route must be YES.
...		
IFC	xxxx	Select the appropriate interface type for route (cannot be SL1 or IDA).
SBN	(NO), YES	(Do not) send billing number. Must be set to YES.

International 1.5/2.0 Mb/s Gateway

Use this procedure to configure International 1.5/2.0 Mb/s Gateway on an Option 11 system.

Pad and coding configuration

LD 14 – Select the pad category table and coding law for the 1.5 Mb/s PRI/DTI trunks used in the gateway.

Prompt	Response	Description
REQ	CHG	Change.
PDCA	0-16	pad category table. Enter 0 if no pad value is to be used.
PCML	M, A	coding law (Mμ- or A-law)

Pad configuration

LD 73 – Set the pad category values for Meridian Digital sets, for the 2 Mb/s PRI/DTI XPE analog Public Exchange trunks, XPE analog Tie trunks, and digital pads for trunk connections between 1.5 Mb/s PRI/DTI and 2 Mb/s PRI/DTI trunks.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	PRI, DTI	1.5 Mb/s PRI or DTI
DSET	x y	pad category value for the new Meridian Digital Set
PRI2	x y	pad category value for the 2 Mb/s PRI/DTI trunks
XUT	x y	pad category value for the XPE analog Public Exchange trunks
XEM	x y	pad category value for the XPE analog TIE trunks
PRI	x y	pad category value for the 1.5 Mb/s PRI/DTI trunks

ISDN CLID enhancements

Feature implementation

The following steps are required to configure the ISDN CLID enhancements:

- In LD 15, construct the CLID table for a customer;
- In LD 21, print the CLID table (to verify CLID entries);
- In LD 10, define the CLID entry for analog (500/2500 type) sets;
- In LD 11, define the CLID entry for DN keys for Meridian 1 proprietary sets;
- In LD 27, define the CLID entry for ISDN BRI sets.

LD 15 — Construct the CLID entry for a customer.

Prompt	Response	Description
REQ:	NEW, CHG	Add new data, or change or delete existing data.
TYPE	NET	Networking data (if REQ = CHG only.)
CUST	0-31	Customer Number.
...		
ISDN	YES	Integrated Services Digital Network.
- PNI	1-327000	Private Network Identifier.
- CLID	YES (NO)	CLID option. YES = configure a CLID table for the customer. NO = (the default) do not configure a CLID table. In this case, the remaining prompts are not generated, and no CLID is sent for the customer.
-- SIZE	0-(256)-4000	The maximum number of CLID entries needed for a customer. If REQ = NEW, you may select the default value (256) by entering <CR> in response to this prompt. It is advised that you not define a size much larger than actually needed. This entry may be increased or decreased as required.

-- INTL	0-9999 X	Country code, for international number. Enter X to delete digits.
-- ENTRY	aaaa Xaaaa Xaaaa Xbbbb <CR>	aaaa = CLID entry to be configured. Xaaaa = CLID entry to be deleted. Xaaaa Xbbbb = CLID entries to be deleted. aaaa and bbbb must be a value between 0 and (SIZE-1). The ENTRY prompt is repeated until <CR> is entered as a response. If REQ = NEW, only one new entry may be created. The entry will be saved to system memory when the configuration for the entire overlay is completed. If REQ = CHG, as many entries as needed may be created, changed or deleted. The action for the entry will be saved to system memory after the CLID entry has been completely configured, that is, after the LSC prompt has been answered. If a new CLID entry is created, or an existing CLID entry is changed, the message "ENTRY aaaa SAVED" is displayed after the LSC prompt. If a CLID entry or CLID entries is/are deleted, the message "ENTRY aaaa DELETED" or "ENTRIES aaaa-bbbb DELETED" is displayed after the LSC prompt.
--- HNTN	0-999999 X	National code for home national number (1-6 digits). X = delete digits.
--- HLCL	0-999..9 X	Local code for home local number or Listed Directory Number (1-12 digits). X = delete digits.
--- DIDN	(YES) NO SRCH	How to use the DN as a DID when constructing a CLID national or local number. YES = The default. The CLID is constructed using the digits defined in HLCL followed by the DN of the active key. NO = Construct the CLID using the digits defined in HLCL. SRCH = Search on the set, from key 0 - upwards, to find a CLID entry which has the DIDN set to YES. Use the found CLID to construct the local number.
--- HLOC	0-9999999 X	Home location code (ESN), 1-7 digits. X = delete digits.
--- LSC	0-9999999 X	Local steering code, 1-7 digits. X = delete digits.

ENTRY aaaa SAVED ENTRY aaaa DELETED ENTRIES aaaa-bbbb DELETED	Displayed message. Refer to Note 3 for the ENTRY prompt.
---	--

It is advised that after the CLID table has been built in LD 15, a printout be generated, using LD 21, to verify the table entries defined in LD 15.

LD 21 — Print the CLID table for a customer.

Prompt	Response	Description
REQ	PRT	Print the customer data block.
TYPE	CLID	CLID entry data.
CUST	0-31	Customer Number.
SIZE	0-4000	The value that was defined for SIZE in LD 15 is printed automatically after the customer number has been entered.
RNGE	aaaa aaaa bbbb <CR>	CLID entry to be printed. Range of CLID entries to be printed (from aaaaa to bbbbb), aaaa and bbbb must be between 0 and the value defined for SIZE-1 in LD 15. Printing begins when <CR> is entered.
INTL	0-9999	Country code, for international number, is printed.
ENTRY	aaaa	CLID entry number in CLID table is printed. If a range of entries is entered in the RNGE prompt, all of the entries in the specified range are printed in sequence.
- HNTN	0-999999	National code for home national number, 1-6 digits, is printed.
- HLCL	0-999..9	Local code for home local number or Listed Directory Number, 1-12 digits, is printed.
- DIDN	YES NO SRCH	The desired choice of how to use the DN as a DID, when constructing a CLID national or local number, will be printed.
- HLOC	0-9999999	Home location code (ESN), 1-7 digits, is printed
- LSC	0-9999999	Local steering code, 1-7 digits, is printed.
...		

LD 10 — Define the CLID entry for analog (500/2500 type) sets.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
TYPE	500	500 set.
TN	c u	Terminal Number address card and unit.
...		
DIG	xx yy	Dial Intercom group number and member number.
DN	xxxx (0)-N	DN and CLID entry. N = CLID SIZE-1 (SIZE defined in LD 15).
...		

LD 11 — Define the CLID entry for DN keys for Meridian 1 proprietary sets.

Note: When assigning a CLID entry to an ACD set, you cannot use the same position ID already on the set. The set must be first outted, or the ACD key must be nulled and then rebuilt with the table entry number.

Prompt	Response	Description
REQ	NEW, CHG	Add new data, or change existing data.
TYPE	xxxx	Type of telephone set.
TN	c u	Card and unit.
...		
KEY	xx MCN yyyy (0)-N/D xx MCR yyyy (0)-N/D xx PVN yyyy (0)-N/D xx PVR yyyy (0)-N/D xx SCN yyyy (0)-N/D xx SCR yyyy (0)-N/D	Telephone function key assignments. xx = key number. MCN = Multiple Call Non-ringing key. MCR = Multiple Call Ringing key. PVN = Private Line Non-Ringing key PVR = Private Line Ringing key SCN = Single Call Non-ringing key. SCR = Single Call Ringing key. yyyy = DN. (0)-N = CLID entry, with N = CLID SIZE-1 (SIZE defined in LD 15). D = CLID entry. Search for a CLID entry from key 0 upwards, to find a DN key. The found CLID is used as the CLID entry for the active DN key.

KEY	xx HOT D dd yyy...y zzzz m (0)-N/D	Two-way Hotline Direct key, where: xx = key number. dd = number of digits dialed. yyy...y = target number (terminating DN, maximum of 31 digits). zzzz = two-way hotline DN. m = one of the following Terminating Modes: H = Hotline (default) N = Non-ringing R = Ringing V = Voice (0)-N = CLID entry, with N = CLID SIZE-1 (SIZE defined in LD 15). D = CLID entry. Search for a CLID entry from key 0 upwards, to find a DN key. The found CLID is used as the CLID entry for the active DN key.
KEY	xx HOT L bbb zzzz (0)-N/D	Two-way Hotline List key, where: xx = key number. bbb = Hot Line List entry (0-999). zzzz = two-way hotline DN. (0)-N = CLID entry, with N = CLID SIZE-1 (SIZE defined in LD 15). D = CLID entry. Search for a CLID entry from key 0 upwards, to find a DN key. The found CLID is used as the CLID entry for the active DN key.

KEY	xx ACD aaaa 0-N/D bbbb	ACD key, where: xx = key number. aaaa = ACD DN or Message Center DN. 0-N = CLID entry, with N = CLID SIZE-1 (SIZE defined in LD 15). D = CLID entry. Search for a CLID entry from key 0 upwards, to find a DN key. The found CLID is used as the CLID entry for the active DN key. bbbb = ACD agent's position ID. Please refer to the note at the top of the overlay table, on page 609, that pertains to assigning a CLID entry to an ACD set.
-----	------------------------	--

LD 27 — Define the CLID entry for ISDN BRI sets.

Prompt	Response	Description
REQ:	NEW, CHG	Add new data, or change existing data.
TYPE	TSP	Administer the Terminal Service Profile on the Digital Subscriber Loop.
...		
- SPID	xxxxxxx	Service Profile Identifier.
DN	xxxx (0)-N	xxxx = DN to be associated with the TSP. (0)-N = CLID entry, with N = CLID SIZE-1 (SIZE defined in LD 15).
...		

ISDN QSIG Basic Call

Feature implementation

LD 17 – Assign Configuration Record.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	ADAN	Action Device and Number.
- ADAN	CHG DCH x	Change input/output device.
...		
-- IFC	ISIG	Interface ID for ISO QSIG download table.
...		
TIMR	(NO), YES	NO = skip timer prompt. YES = change timer value.
T310	110 - (120)	The timer is used to define how long Meridian 1 can wait for the response message when the QSIG outgoing call is in an outgoing call proceeding state.

LD 16 – Define Route Data Block.

Prompt	Response	Description
REQ	NEW, CHG	New, or Change.
TYPE	RDB	Route Data Block.
...		
DGTP	PRII	Digital Route Type
IFC	ISIG	New DCH interface identification as entered in LD 17.

LD 97 – System Configuration.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	SYSM	System parameters for Multi-purpose Serial Data Link (MSDL) or Multi-purpose ISDN Signaling Processor (MISP).
...		
FDLC	p1 p2 p3 p4	Fast download control parameters. p1 = Application will be set to PRIE or BRIE. p2 = Specifies conditional (C) or forced downloading (F). p3 = Specifies current (C), latest (L) and specified (S) version. p4 = xx (version number if p3 = S).

ISDN QSIG Call Completion**Feature implementation**

LD 17– Configure Remote Capabilities to Call Completion for the QSIG interface.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	ADAN	Configuration Record.
- ADAN	CHG DCH x	Change D-channel.
...		
- IFC	ISGF	Interface type for route where ISGF = Interface ID for ISO QSIG with GF capability
...		
- RCAP	CCBS	Add Call Completion to Busy Subscriber as remote capability.
- RCAP	CCNR	Add Call Completion No Response. This prompt is only applicable to QSIG interfaces.

LD 10 – Add or Change Ring Again on Analog (500/2500 type) telephones.

Prompt	Response	Description
REQ:	CHG, NEW	Change, or Add.
TYPE:	500	Telephone type.
TN	c u	Terminal Number.
...		
CLS	XRA	Ring Again allowed. XRD = Ring Again denied (default).

LD 11 – Add or Change Ring Again on Meridian 1 proprietary telephones.

Prompt	Response	Description
REQ:	CHG, NEW	Change, or Add.
TYPE:	aaaa	Telephone type where aaaa = SL1, 2006, 2008, 2009, 2016, 1018, 2112, 2216 2317, 2616 or 3000.
TN	c u	Terminal Number.
...		
KEY	xx RGA	Assign Ring Again key where xx = key number. On M2317 and M3000 telephones xx = 27.

LD 57 – Define Ring Again Flexible Feature Codes (FFCs) and FFC Confirmation Tone.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	FFC	Flexible Feature Code.
CUST	xx	Customer number.
FFCT	YES	Confirmation tone provided after FFC is activated. NO = Confirmation tone not provided.

CODE	RGAA	Ring Again activate.
RGAA	xx	Ring Again code.
CODE	RGAD	Ring Again deactivate.
RGAD	xx	Ring Again deactivation code.
CODE	RGAV	Ring Again verification.
RGAV	xx	Ring Again verification code.

LD 15 – Configure a Private Integrated Services Network Exchange (PINX) DN.

Prompt	Response	Description
REQ:	CHG	Change.
TYPE:	NET	Networking.
CUST	xx	Customer number.
- PINX_DN	xx...x	Node DN to a maximum of seven digits with DN extension.

ISDN QSIG Call Diversion Notification

The QSIG Call Diversion Notification feature requires the configuration of one of the following call redirection features: Call Forward All Calls, Call Forward/Hunt Override Via Flexible Feature Codes, Call Forward Remote (Attendant and Networkwide), Call Forward No Answer/Flexible Call Forward No Answer, Call Forward No Answer Second Level, Call Forward Internal Calls and User Selectable Call Redirection. The implementation of these features is not modified.

Remote Capability Meanings

Table 18 indicates the remote capabilities meanings for D-channel routes. When using Table 18 consider the following:

- Only nodes subject to be Originating, Served, Diverted or Rerouting nodes with respect to QSIG Call Diversion Notification need to have diversion remote capability configured. Transmit nodes pass the information transparently.
- When choosing the Operation Coding Choice, the interface type should be considered. When the QSIG interface used is ISO (IFC ISGF), operations are mostly coded with Integer Values.

Only one remote capability allows the QSIG Diversion configuration on a D-channel route. This remote capability gathers the three following possibilities for the D-channel route:

- 1 coding of operations sent to the remote switch, which can be coded as either as Object Identifier or as Integer Value. If coded as Object Identifier, the remote capability ends with an 'O', whereas for Integer Value, the remote capability ends with an 'I'. This means that remote capabilities explained below in 2 and 3 are defined twice.
- 2 sending of QSIG Diversion Notification Information to the remote switch: this information is sent only if the remote capability is of first or third type, i.e. DV1x or DV3x, where the x is either 'I' or 'O' as explained in 1.
- 3 treatment of Rerouting requests received from the remote switch: a rerouting request is only processed if the remote capability is of second or third type, i.e. DV2x or DV3x, where x is either 'I' or 'O' as explained above in 1.

Table 18
Remote Capability Meanings

Remote capability	Meaning for Operation Coding	Meaning for Notification Information	Meaning for Rerouting request
None of the following remote capabilities.	Not applicable (nothing sent)	Not <u>sent</u>	Not processed when <u>received</u>
DV1O	<u>Sent</u> coded as Object Identifier	<u>Sent</u>	Not processed when <u>received</u>
DV1I	<u>Sent</u> coded as Integer Value		
DV2O	<u>Sent</u> coded as Object Identifier	Not <u>Sent</u>	Processed when <u>received</u>
DV2I	<u>Sent</u> coded as Integer Value		
DV3O	<u>Sent</u> coded as Object Identifier	<u>Sent</u>	Processed when <u>received</u>
DV3I	<u>Sent</u> coded as Integer Value		

LD 17 – Configure or remove remote capabilities D-channel for QSIG Call Diversion Notification.

Prompt	Response	Description
REQ:	CHG	Change existing data.
TYPE:	ADAN	Action device and number.
ADAN	CHG DCH x	Configure new remote capabilities on D-channel x.
...		
IFC	ISGF	QSIG Interface ID for ISO with GF capability.
...		
RLS	23	Release 23 and later.
...		
RCAP		QSIG SS Call Diversion Notification remote capability. Configure sending of QSIG Diversion Notification Information, treatment of Rerouting request and coding of operations. If coded as Object Identifier, the remote capability ends with 'O', whereas for Integer Value, the remote capability ends with 'I'. Only one remote capability is allowed. Refer to Table 1 for further information.
	DV1I	Diversion information is sent to remote switch.
	DV1O	Diversion information is sent to remote switch.
	DV2I	Rerouting requests from remote switch are processed.
		Rerouting requests from remote switch are processed.
	DV2O	Diversion information is sent to remote switch. Rerouting requests from remote switch are processed.
		Diversion information is sent to remote switch.
	DV3I	Diversion information is sent to remote switch.
	DV3O	Rerouting requests from remote switch are processed.
		Precede with 'X' to remove capability.

LD 16 – Configure Remote Capability for a QSIG ISGF interface.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	0-127	Route Number.
...		
IFC	ISGF	QSIG Interface ID for ISO with GF capability.
...		
RCAP		QSIG SS Call Diversion Notification remote capability. Configure sending of QSIG Diversion Notification Information, treatment of Rerouting request and coding of operations. If coded as Object Identifier, the remote capability ends with 'O', whereas for Integer Value, the remote capability ends with 'I'. Only one remote capability is allowed. Refer to Table 1 for further information.
	DV1I	Diversion information is sent to remote switch.
	DV1O	Diversion information is sent to remote switch.
	DV2I	Rerouting requests from remote switch are processed.
		Rerouting requests from remote switch are processed.
	DV2O	Diversion information is sent to remote switch. Rerouting requests from remote switch are processed.
	DV3I	Diversion information is sent to remote switch.
	DV3O	Rerouting requests from remote switch are processed.
		Precede with 'X' to remove capability.

LD 10 – Configure QSIG Diversion Notification on analog (500/2500 type) telephones

Prompt	Response	Description
REQ:	NEW CHG	Add new data. Change existing data.
TYPE:	500	Telephone type.
...		
TN	c u	Terminal Number.
...		
DN	x...x yyy	Directory Number and Calling Line Identification entry (Range is (0) - value entered for SIZE prompt in LD 15 minus one).
...		
- CPND	aaa	Calling Party Name Display where: NEW = Add data block. CHG = Change existing data block. OUT = Remove existing data block.
- -CPND_LANG	aaa	Calling Party Name Display Language where: (ROM) = Roman. KAT = Katakana.
- - NAME	aaaa bbbb	Calling Party Name Display Name where: First name Last name.
...		
CLS	(DNO3) DNO1 DNO2	QSIG Call Diversion Notification options for calling party. Notification with diverted-to party's number and name. No notification. Notification without diverted-to party's number and name.

	(DNDY) DNDN	QSIG Call Diversion Notification options concerning forwarded- to party. Notification with Called party's number and name. Notification without Called party's number and name.
	CNDA	Call Party Name Display Allowed
	CFXA	Call Forward to External DN Allowed.
	CFTA	Call Forward by Call Type Allowed.
	DDGA	Directory Number Display on other set Allowed.
	FNA	Call Forward No Answer Allowed.
	HTA	Hunting Allowed.
	NAMA	Name Display on other set Allowed or (Denied).

LD 11– Configure QSIG Diversion Notification on Meridian 1 proprietary telephones.

Prompt	Response	Description
REQ:	NEW CHG	Add new data. Change existing data.
TYPE:	xxxx	Telephone type, where: xxxx = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616 or 3000.
...		
TN	c u	Terminal Number.
...		
FDN	x...x	Flexible Call Forward No Answer DN for an Internal Directory Number.
...		
CLS	(DNO3) DNO1 DNO2	QSIG Call Diversion Notification options for calling party. Notification with diverted-to party's number and name. No notification. Notification without diverted-to party's number and name.

	(DNDY) DNDN	QSIG Call Diversion Notification options concerning forwarded- to party. Notification with Called party's number and name. Notification without Called party's number and name.
	CNDA	Call Party Name Display Allowed
	CFXA	Call Forward to External DN Allowed.
	CFTA	Call Forward by Call Type Allowed.
	DDGA	Directory Number Display on other set Allowed.
	FNA	Call Forward No Answer Allowed.
	HTA	Hunting Allowed.
	NAMA	Name Display on other set Allowed or (Denied).
...		
RCO	(0) - 2	Ringing Cycle Option for Call Forward No Answer.
EFD	x...x	Call Forward No Answer Directory Number for external calls
...		
- CPND	aaa	Calling Party Name Display where: NEW = Add data block. CHG = Change existing data block. OUT = Remove existing data block.
--CPND_LANG	aaa	Calling Party Name Display Language where: (ROM) = Roman. KAT = Katakana.
-- NAME	aaaa bbbb	Calling Party Name Display Name where: First name Last name.

LD 95 – Modify Call Party Name Display data block.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	CPND	Call Party Name Display data block.
CUST	xx	Customer number.
...		
RESN	YES	Display Redirection reason allowed. (NO) = Display Redirection reason denied (default).
- CFWD	aaaa	Mnemonic for Call Forward All Call display. (F) = default
- CFNA	aaaa	Mnemonic for Call Forward No Answer display (N) = default.
- HUNT	aaaa	Mnemonic for Call Forward Busy display. (B) = default

LD 95 – Define Name for telephones.

Prompt	Response	Description
REQ	NEW	Add new data.
TYPE	NAME	Name.
CUST	xx	Customer number.
...		
DN	x..x	Directory Number.
- NAME	a..a	Calling Party Name Display in ASCII characters.

LD 11 – Configure the name that is to be displayed on the Forwarded-to (diverted) Party's set.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	xxxx	Telephone type, where: xxxx = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616 or 3000.
TN	c u	Terminal Number.
...		
CLS	DNDA	Dialed Name Display Allowed. (DNDD)= Dialed Name Display Denied (default).

Note: LD 81 may be used to print counting or listing queries pertaining to the new Classes of Service, by entering CNT or LST against the REQ prompt, and the appropriate COS against the FEAT prompt.

Note: LD 83 may be used may be used to print the new Classes of Service in the TN blocks, by entering TNB against the REQ prompt, and the appropriate COS against the CLS prompt.

ISDN QSIG Generic Functional Transport

Feature implementation

LD 16 – Configure Automatic Trunk Maintenance in Route Data Block.

Prompt	Response	Description
REQ	NEW, or CHG	New, or change.
TYPE	RBD	Route Data Block.
...		
DGTP	PRI	Digital Route type.
IFC	ISGF	ISGF = ISO QSIG interface with GF platform. The ESIG and ISIG prompt can be entered if both QSIG and QSIGGF packages are included.

LD 17 – Configuration Record.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	CFN	Configuration Record.
ADAN	aaa aaa x	Add, Move or Change Input/Output Device
...		
- IFC	ISGF	ISGF = ISO QSIG interface with GF platform.
PINX-CUST	0-99	Customer number.
ISDN_MCNT	60-(300)-350	Layer 3 call control message count five per second time interval.

ISDN QSIG Name Display

Feature implementation

LD 95 – Modify the Call Party Name Display (CPND) data block.

Prompt	Response	Description
REQ	NEW	Create Call Party Name Display data block.
TYPE	CPND	Call Party Name Display data block.
CUST	0-31	Customer number.
....		
REQ	NEW	Create new name strings.
TYPE	NAME	Name Strings.
CUST	0-31	Customer number.
...		
DN	xxxx	Directory Number.

LD 10 – Define Class of Service Name Display Allowed on Analog (500/2500 type) sets.

Prompt	Response	Description
REQ:	NEW, CHG	Add, or Change.
TYPE:	500	Type of telephone.
CUST	0-31	Customer number.
...		
CLS	CNDA	Called Party Number Display Allowed. Allows called/connected party name to be viewed by calling party. (CNDD) = Call Number Display Denied (default).
CLS	NAMA	Name Display Allowed on the far end. (NAMD) = Name Display Denied (default).
FTR	CPND	Allow Call Party Name Display name assignment.

LD 11 – Define Class of Service Name Display Allowed on Meridian 1 proprietary sets.

Prompt	Response	Description
REQ:	NEW, CHG	Add, or Change.
TYPE:	xxxx	Telephone type, where: xxxx = SL1, 2006, 2008, 2009, 2016, 2018, 2112, 2216, 2317, 2616 or 3000.
CUST	0-31	Customer number.
...		
CLS	CNDA	Call Party Name Display Allowed. Allows display of original DN name on redirection. (CNDD) = Call Party Name Display Denied (default).
CLS	DNDA	Dialed Name Display Allowed. This displays the originally dialed DN Name on redirected calls. (DNDD) = Dialed Name Display Denied.
CLS	NAMA	Name Display Allowed on the far end (default). (NAMD) = Name Display Denied.

LD 12 – Define Class of Service Name Display Allowed on Attendant Consoles.

Prompt	Response	Description
REQ	NEW, CHG	Add, or Change.
TYPE	xxxx	Console type where xxxx =1250 or 2250.
TN	c u	Terminal Number.
...		
CPND	CNDA	Call Party Name Display Allowed. (CNDD) = Call Party Name Display Denied (default).

LD 17 – Configure Remote Capability for QSIG D-channel.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	ADAN	Action Device and Number.
- ADAN	aaa dch x	Change or New D-channel where aaa = NEW or CHG.
...		
- IFC	SL1	Interface type for D-channel.
...		
- RCAP	NDS	Allow Name Display Services (NDS) as new remote capability.

LD 17 – Configure Remote Capability for MCDN D-channel.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	ADAN	Action Device and Number.
- ADAN	aaa dch x	Change Input/Output Device.
...		
- IFC	SL1	Interface type for D-channel.
...		
- RCAP	ND3	Allow Name Display 3 (ND3) as new remote capability.

LD 57 – Define the Calling Party Privacy Flexible Feature Code for Meridian 1 proprietary and Analog (500/2500 type) sets.

Prompt	Response	Description
REQ	NEW, CHG	Add, or Change.
TYPE	FFC	Flexible Feature Code data block.
CUST	0-31	Customer number.
FFCT	YES	Flexible Feature Confirmation Tone.
...		
CPP	xxxx	Calling Party Privacy Flexible Feature Code (typically *67). CPP is only prompted if the CPP package is equipped.

ISDN QSIG Path Replacement

LD 15 – Configure Private Integrated Services Network Exchange Directory Number.

Prompt	Response	Description
REQ:	CHG	Change existing data.
TYPE:	NET	Networking.
CUST	xx	Customer number.
...		
ISDN	YES	Integrated Services Digital Network.
...		
- PINX_DN	xx...x	Private Integrated Services Network Exchange Directory Number, up to seven digits.

LD 16 – Configure New Path Replacement parameters for a QSIG ISGF interface.

Prompt	Response	Description
REQ	CHG NEW	Change existing data. Add new data.
TYPE	RDB	Route Data Block.
CUST	xx	Customer number.
ROUT	0-127	Route Number.
...		
DTRK	YES	Digital Trunk Type.
- DGTP	PRI	PRI trunk.
- IFC	ISGF	QSIG Interface ID for ISO with GF capability.
...		
RCAP		Add Path Replacement as a remote capability.
	PRI PRO	PRI = The encoding method uses Integer values. PRO = The encoding method uses Object Identifier. PRI and PRO are mutually exclusive, and cannot be configured together at the same time on the same link. Precede PRI and PRO with X to remove. The previously configured PR parameters will be valid, if PR is deactivated and then reactivated.
...		
PR_TRIGS	<CR>	Path Replacement Triggers. <CR> = If REQ = NEW, the parameters are set to the default values, which are: DIV 2 3 (two PR attempts, with a three minute delay for Diversion triggers) CNG 2 3 (two PR attempts, with a three minute delay for Congestion triggers) XCON (Connected Number is not a trigger). If REQ = CHG, the Path Replacement parameters are not modified.

	DIV xx-y CNG xx-y CON xx-y	DIV = Diversion is used to trigger Path Replacement. CNG = Congestion is used to trigger Path Replacement. A Connected number different from a called number is used to trigger Path Replacement. where: xx = 0-(2)-15, the number of Path Replacement attempts (the default is two). If 0 is entered, the number will be set to infinite. yy = 1-(3)-7, the delay, in minutes, between two consecutive Path Replacement attempts (the default is three minutes). Precede DIV, CNG, and CON with X to remove the Path Replacement trigger.
PR_RTN	YES (NO)	Retain option is (is not) supported by the far end PINX.
...		

LD 17 – Configure QSIG Path Replacement for a QSIG ISGF interface.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	CFN	Configuration Record.
ADAN	CHG DCH X	Change D-Channel number.
...		
- IFC	ISGF	QSIG Interface ID for ISO with GF capability.
...		
- RCAP	aaa	Add Path Replacement as remote capability where: PRI = Integer values as encoding method. PRO = Object identifier as encoding method. Precede with X to remove.
...		
PR_TRIGS	<CR>	Path Replacement Triggers. <CR> = If REQ = NEW, the parameters are set to the default values, which are: DIV 2 3 (two PR attempts, with a three minute delay for Diversion triggers) CNG 2 3 (two PR attempts, with a three minute delay for Congestion triggers) XCON (Connected Number is not a trigger). If REQ = CHG, the Path Replacement parameters are not modified.
	DIV xx-y CNG xx-y CON xx-y	DIV = Diversion is used to trigger Path Replacement. CNG = Congestion is used to trigger Path Replacement. CON = A Connected number different from a called number is used to trigger Path Replacement. where: xx = 0-(2)-15, the number of Path Replacement attempts (the default is two). If 0 is entered, the number will be set to infinite. yy = 1-(3)-7, the delay, in minutes, between two consecutive Path Replacement attempts (the default is three minutes).
PR_RTN	YES (NO)	Retain option is (is not) supported by the far end PINX.

ISDN Signaling Link

Configuring ISL

To configure ISL, perform the following steps:

- 1** LD17 Configuration Record
Configure the D-channel for ISL use.
X11 RELEASE 17 AND EARLIER

OR

- 2** LD17 Configuration Record
Configure the D-channel for ISL use.
X11 RELEASE 18 AND LATER
- 3** LD15 Customer Data Block
Define a PRI customer
- 4** LD16 Route Data Block
Enable the ISL option on a per route basis
- 5** LD 14
Assign a D-channel for each route

LD 17 – Configure the D-Channel for ISL (X11 Release 17 and earlier).

Prompt	Response	Description
REQ	CHG	
TYPE	CFN	Configuration record
...		
PAM		
ISDN	YES, (NO)	
DCHI	1-15	DCHI port number (remove with Xnn)—only odd numbers allowed
BCHI	1-15	Back-up DCHI port number
USR		Change DCHI parameters
	PRA	D-channel for ISDN PRI only

	ISLD	D-channel for ISL in “dedicated” mode
	SHA	D-channel for ISL in “shared” mode, used for both ISDN PRI and
		Note 1: One of the above responses is mandatory and there is no default.
		Note 2: Package 147, ISDN Signaling Link, is required.
DCHL	0-159	PRI loop for DCHI, not prompted with D-channel in dedicated mode (D-channel does not require a channel on the PRI)
BCHL	0-159	PRI loop number for BCHI
OTBF	1-(16)-127	Number of output request buffers—use default (16)
DRAT		D-channel transmission rate
	56K	56 Kbps, default when LCMT (LD17) is AMI
	64KC	64 Kbps clear, default when LCMT (LD17) is B8S
	64KI	64 Kbps inverted HDLC (64 Kbps restricted)
		In X11 release 15 and later DRAT is not prompted when configuring ISL D-channels because the speed is controlled by the modem baud rate
PRI	loop ID	Not prompted if the D-channel is in dedicated mode (the D-channel does not require a channel on the PRI card)
ISLM	1-382	Number of ISL trunks controlled by the D-channel (no default value)
CLOK	(EXT), INT	D-channel clock type
		EXT = Source of primary clock is external to DCHI card. Normally, EXT is used with PRI/ISL.
		INT = Source of primary clock is internal to DCHI card. INT is used only during DCHI loop back testing, where one side is set to INT, the other side is set to EXT.

LD 17 – Configure the D-Channel for ISL (X11 Release 18 and later).

Prompt	Response	Description
REQ	CHG	Change
TYPE	CFN	Configuration Record
ADAN	NEW DCH 0-63	Add a primary D-channel (can also CHG and OUT DCH)
CTYP	DCHI, MSDL	Card type
DNUM	0-15	Device number: physical port (odd) for D-channel on DCH, physical card address for MSDL
- PORT	0-3	Port number on MSDL card
USR	PRI, ISLD, SHA	D-channel mode
- ISLM	1-382	Number of ISL trunks controlled by the D-Channel
DCHL	0, 2, 4,...159	PRI loop number for DCHI
OTBF	1-(32)-127	Number of output request buffers
- BPS	xxxx	Baud rate for ISL D-channel on MSDL port (default 64000)
- PARM	R232,(R422) DCE, (DTE)	ISL D-channel interface and transmission mode (MSDL port only)
PRI	0-159 2-15	Additional PRI loops using the same D-channel, and interface ID
DRAT	(56K), 64KC, 64KI	D-channel transmission
IFC	aaa	Interface type: (D100), D250, ESS4, ESS5, SL1, S100
SIDE	NET, (USR)	Meridian 1 node type
RLS	xx	Release ID of the switch at the far end of the D-Channel
RCAP	aaa	Remote D-channel capabilities: MSL, NCT, ND1, ND2, RVQ
- CLOK	INT, (EXT)	Internal or external clock on ISL D-channels
LAPD	Yes, (No)	D-channel LAPD parameters

- T23	1-(20)-31	Interface guard timer (DCHI only)
- T200	2-(3)-40	Retransmission timer
- N200	1-(3)-8	Maximum number of retransmissions
- N201	4-(260)	Maximum number of octets in information field
- T203	2-(10)-40	Maximum time (in seconds) without frames being exchanged
- K	1-(7)	Maximum number of outstanding frames
ADAN	NEW BDCH 0-63	Add a backup D-channel
PDCH	0-63	Primary D-channel
CTYP	DCHI, MSDL	Card type
DNUM	0-15	Physical port (odd) for D-channel, card number for MSDL
- PORT	0-3	Port number on MSDL card
BCHL	0,2,4,...,-159	PRI loop number for back-up D-channel
RCVP	Yes, (No)	Auto-recovery to primary D-channel option
ADAN	<cr>,****	Go on to next prompt or exit overlay

LD 15 – Define a PRI customer and networking data.

Prompt	Response	Description
REQ	NEW, CHG	Add or change a customer
TYPE	CDB NET_DATA	Customer data block Networking Data (Release 21 gate opener)
CUST	0-31	Customer number
...		
- ISDN	YES	ISDN
- PNI	1-32700	Private Network Identifier (for CLID)
- PFX1	xxxx	Prefix (area) code for International PRA (for CLID)

- PFX2	xxxx	Central Office Prefix for IPRA (for CLID)
- HNP	100-319	Home Number Plan Area code (for CLID)
- HNXX	100-319	Prefix for Central Office (for CLID)
- HLOC	100-3199	Home Location Code (ESN) (for CLID)
- LSC	xxxx	Local steering code (for CLID)
- CNTP	LDN, (PDN)	Default for Calling Line ID (CLID)
- RCNT	0-(5)	Maximum inter-node hops in a network redirection call

LD 16 – Enable ISL on a per route basis.

Prompt	Response	Description
REQ	NEW	Add a PRI trunk route
TYPE	RDB	Type of data
CUST	0-31	Customer number
ROUT	0-511	Route number
TKTP	ISL	Trunk route type:
ESN	Yes, (No)	ESN signaling
BRIP	Yes, (No)	ISDN BRI packet handler route
ISDN	Yes, (No)	ISDN PRI option
- MODE	ISLD	Mode of D-Channel that controls the route
- DCHI	1-15	DCHI port number Prompted if Mode = ISLD
- PNI	0-32700	Customer Private ID (unique to a customer)
- IFC	SL1	Interface machine type for this PRI route
- NCNA	Yes	Network call name allowed
- NCRD	Yes	Network Call Redirection
- TRO	(No), Yes	Trunk optimization allowed (denied) on the route

- NSF	(No), Yes	Network Service Facility
- TIER	0-511	Incoming Tie route number
- CHTY	ABCH, (BCH)	Signaling type for B-channel digital routes
- CTYP	aaa	Call type for outgoing direct dialed Tie route
- INAC	Yes, (No)	Insert ESN access code to incoming private network call
- NCOS	(0)-99	Network Call Of Service
- CLS	aaa	Class of service restriction for tie route
- TGAR	0-31	Trunk group access restrictions
- IEC	000-319	Interexchange carrier ID
PTYP	aaa	Port type at far end
ICOG	IAO, ICT, OGT	Incoming and/or outgoing trunk
SIGO	aaa	Signaling arrangement
NEDC	ORG, ETH	Near end disconnect control
FEDC	ETH, FEC, JNT,(ORG)	Far end disconnect control
CPDC	Yes, (No)	Meridian 1 is the only controlling party on incoming calls
DLTN	Yes, (No)	Provide dial tone to the far-end
PSEL	TLNK, (DMDM)	T-link or DM-DM protocol selection
EQAR	Yes, (No)	Enable Equal Access on this route
- GCR	(Yes), No	Use General Carrier Restriction for Equal Access calls
- NTOL	ALLOW, (DENY)	Allow or deny North American toll calls (1+ calls)
- ITOL	ALLOW, (DENY)	Allow or deny international toll calls (011+ calls)
- SCR	Yes, (No)	Use Selective Carrier Restriction for Equal Access calls
AUTH	Yes, (No)	Authcode to be prompted for incoming tie callers

LD 14 – Assign a channel identification to each trunk with the ISL option.

Prompt	Response	Description
REQ	NEW	
TYPE	TIE	Trunk type allowed
TN	loop ch	Use loop number created in LD17
RTMB	0-511 1-254	The route defined as an ISA route in LD16
CHID	1-382	Channel identifier for ISL channels (remove with Xnn)—must be coordinated with far end (no default value)

Meridian Mail Trunk Access Restriction

Feature implementation

Meridian Mail Trunk Access Restriction feature requires prior installation of Meridian Mail. The implementation of this feature, therefore, assumes that Meridian Mail has been properly configured.

LD 15 – Enable Meridian Mail Trunk Access Restriction.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	FTR	Customer Features and Options.
CUST	0 - 31	Customer Number.
- OPT	MCI	Message Centre Included.
...		
- MTAR	YES	Trunk to Mail Access Allowed. NO = Restricted.

Message Waiting Indication (MWI) Interworking with DMS

Response to the following prompts in the listed overlays activates MWI Interworking.

LD 17—Configuring MWI remote D channel capability

Prompt	Response	Description
REQ	CHG	Change system data
TYPE	CFN	Configuration record
ADAN	CHG DCH 0-63	Change Primary D-Channel
RLS	19, 36	Release ID of the switch at the far end of the D-channel interface. 19 is Meridian 1, 36 is DMS.
RCAP	MWI XMWI	Add remote D-channel capabilities for MWI Remove remote D-channel capabilities for MWI

LD 15—Enable Message Services.

Prompt	Response	Description
REQ	CHG	
TYPE	CDB	Customer Data Block
OPT	MCI	Message Center is included. This prompt must be set to include the message center feature for both the user's telephone and the message center if the message center is on M-1.

LD 23—Configuring a Message Center DN.

Prompt	Response	Description
REQ	NEW, CHG	Add or change system data
TYPE	ACD	Automatic call distribution
CUST	0–99	Customer number
ACDN	xxxx	ACD Directory Number
MWC	YES	ACD DN message center DN
NCFW	xx ... xx	Message Center DN: — a public DN (10 digits) prefixed by an ESN access code. — an ESN number prefixed by an ESN access code Note: Do not define an agent for this ACD group to allow for the automatic call redirection to the ACD Night Call Forward DN where the Message Center DN is defined.

LD 11—Define the ACD Group as the Message Center DN for each telephone.

Prompt	Response	Description
REQ	NEW, CHG	Add or change system data
TYPE	ACD	Automatic call distribution
CUST	0–99	Customer number
ACDN	xxxx	ACD Directory Number
MWC	YES	ACD DN message center DN

Prompt	Response	Description
NCFW	xx ... xx	Message Center DN: — a public DN (10 digits) prefixed by an ESN access code. — an ESN number prefixed by an ESN access code Note: Do not define an agent for this ACD group to allow for the automatic call redirection to the ACD Night Call Forward DN where the Message Center DN is defined.

LD 15—Configure AC2 to insert ESN Access Code and PNI.

Prompt	Response	Description
REQ	NEW, CHG, END	
TYPE	CDB NET_DATA	Customer Data Block Networking Data (Release 21 gate opener)
...		
- AC2		Access code 2. Enter call types (type of number) that use access code 2. Multiple call types can be entered. Default is to access code 1.
	NPA	E.164 National
	NXX	E.164 Subscriber
	INTL	International
	SPN	Special number
	LOC	Location code
- ISDN	YES	Change ISDN options

Prompt	Response	Description
- PNI	1-32700	Customer private identifier—unique to a customer. Within one network, use the same value for PNI in both the Customer Data Block (LD 15) and the Route Data Block (LD 16) in all PBXs.
...		
- HNPA	200- 999 1200- 1999	Home Number Plan Area code defined in LD 90
- HNXX	100-9999	Prefix for the central office
- HLOC	100-999	Home location code (NARS)
- LSC	1-9999	1- to 4-digit Local Steering Code established in the Coordinated Dialing Plan (CDP). The LSC prompt only appears if user has a 5- or 6-digit dialing plan.

LD 16—Configure PNI and INAC or INST.

Prompt	Response	Description
REQ	NEW,CHG,OUT	Route Data Block
TYPE	RDB	
...		
- PNI	1-32700	Customer private identifier—unique to a customer. Within one network, use the same value for PNI in both the Customer Data Block (LD 15) and the Route Data Block (LD 16) in all PBXs.

Prompt	Response	Description
- INAC	(NO), YES	Insert access code. Permit an ESN access code to be automatically added to an incoming ESN call from a private network. If INAC is YES, the digit insertion option (INST) is bypassed. This prompt only appears if the route type is a TIE trunk.
- INST	(0)–99999999	Digits to be inserted in front of leading digits. Use this prompt if route is used for connection to DMS.

LD 90—Configure Home Location Code.

Prompt	Response	Description
REQ	NEW, CHG	Add or change
CUST	xx	Customer number (0–99)
FEAT	NET	Network translation tables
TRAN	AC1, AC2	Access code 1 or 2
TYPE	HLOC	Home location code
HLOC	xxx	Home location code (3–7 digits)

LD 90—Configure Home NPA.

Prompt	Response	Description
REQ	NEW, CHG	Add or change
CUST	xx	Customer number (0–99)
FEAT	NET	Network translation tables
TRAN	AC1, AC2	Access code 1 or 2
TYPE	HPNA	Home NPA Translation
HNPA	xxx	Home NPA

LD 90—Configure Central Office Translation.

Prompt	Response	Description
REQ	NEW, CHG	Add or change
CUST	xx	Customer number (0–99)
FEAT	NET	Network translation tables
TRAN	AC1, AC2	Access code 1 or 2
TYPE	NXX	Central Office Translation
NXX	xxx	Office code translation
RLI	0–255	Route list index
SDRR	LDID	Recognized local DID codes
DMI	1–255	Digit manipulation table index. DMI should delete 3 digits.
LDID	xxx	Local DID number recognized within the NPA and NXX.

National ISDN 2 TR-1268 Primary Rate Interface

LD 17 – Configure the primary D-channel.

Prompt	Response	Description
REQ	NEW/CHG	Add/change configuration information.
TYPE	CFN	Configuration Record.
ADAN	NEW, CHG, OUT, DCH xx	Add, change, or remove primary D-channel data where: xx = 0,1, ... 63.
CTYP	MSDL	Supported only on Multi-purpose Serial Data Link (MSDL) or Downloadable D-channel cards.
...		
USR	PRI	D-channel mode.
IFC	NI2	NI-2 TR-1268 interface type.
PRI	lll nn	lll = PRI loop using the same D-channel (0,1,...159) nn = Interface identifier (2,3,...15)
...		

LD 17 – Configure the backup D-channel.

Prompt	Response	Description
REQ	NEW/CHG	Add/change configuration information.
TYPE	CFN	Configuration Record.
ADAN	NEW, CHG, OUT, BDCH yy	Add, change or remove backup D-channel data, where: yy= 0,1, ... 63.
PDCH	xx	Associated primary D-channel, where: xx = 0,1, ... 63.
CTYP	MSDL	Card type.
...		

LD 16 – Use this overlay to define a route data block (for ISDN PRI).

Prompt	Response	Description
REQ	NEW, CHG	New or change.
TYPE	RDB	Route data block.
...		
DGTP	PRI	Digital route type.
IFC	NI2	New DCH interface ID.
...		

Network Attendant Service

Use this procedure to configure *Network Attendant Service (NAS)* on an Option 11 system.

Programming procedure

- 1 LD 12 – Configure Attendant Consoles with NAS keys.
- 2 LD 15 – Enable or disable network attendant control, Recall to Same Attendant, NAS routing, and define a TRK ICI key.
- 3 LD 17 – Configure the D-channel interface (DCHI) for NAS.
- 4 LD 86 – Configure NAS routing.
- 5 LD 93 – Assign a NAS routing table to Console Presentation Groups.
- 6 LD 16 – Allow or deny pre-answer tromboning (allow or deny an incoming call to be directly routed back on the same route).

Step 1 - Use LD 12 to configure attendant consoles with NAS keys.

Prompt	Response	Description
TYPE	ATT,1250,2250	Type of console
TN	c u	TN address of attendant
KEY	xx NAS	xx (0-19) is the key number assigned to NAS. Each console can have only one NAS key defined. Note: This key assignment is optional.

Step 2 - Use LD 15 to enable or disable network attendant control, Recall to Same Attendant, NAS routing, and define a TRK ICI key.

Prompt	Response	Description
ICI	xx NCO/NDID/N TIE/ NFEX/NWAT	Enter the key number xx (0-19) assigned to NAS, followed by a space, followed by the trunk type (NCO, NDID, NTIE, NFEX, or NWAT)
RTSA	(RSAD),RSA, RSAX	RSAD = Recall to Same Attendant denied (the default); RSAA = Recall to Same Attendant allowed RSAX = Recall to Same Attendant allowed, with queuing to a specific attendant if the same attendant is busy.
NAS ATCL	(YES),NO	YES = allow attendant control for call extension (the default) NO = deny attendant control for call extension
NAS ACTV	(YES),NO	YES = allow NAS routing (the default) NO = deny NAS routing

Step 3 - Use LD 17 to configure the D-channel interface (DCHI) for NAS.

Prompt	Response	Description
DCHI	xxx	Respond with DCHI number for which NAS signaling is to be allowed or restricted
NASA	(YES),NO	YES = allow DCHI for NAS signaling (the default) NO = deny DCHI for NAS signaling

Step 4 - Use LD 86 to configure NAS routing

Prompt	Response	Description
FEAT	NAS	Specifies type of data to be changed
TBL	0-63	Routing table number, from 0 to 63. Without Multi-Tenant Service, 0 is the customer routing table. With Multi-Tenant Service enabled, NAS tables 1-63 may be associated with CPGs 1-63.
ALT	0-7	An alternative attendant or routing table, from 1 to 7. (To clear an old number, type an X before typing the new number. The old number cannot be cleared if it is associated with a schedule period. Reach TODS by pressing the return key.)
ID	XXXXXXXXXX XXXX	The dialed digits (including the network access code) needed to reach an attendant associated with the alternative number. Respond with a string of up to 16 digits to change the attendant ID; press the return key to leave the ID unchanged, exit the prompt, and return to ALT

Prompt	Response	Description
TODS	0-31	Specifies a schedule period, from 0 to 31, where 0 is the default to handle all time periods not defined in 1 through 31. Type an X before a period number to remove the schedule period. (Typing an X before a 0 clears all associated alternatives, leaving the default treatment as local attendant treatment.) Press the return key to continue the NAS feature setup process
PER	HR:MIN HR:MIN	Specifies the start and stop times for the period using 24hour format. Start time must be before the stop time, and minutes can be only 00 or 30. Press the return key to leave times unchanged and move to the DAYS prompt
DAYS	D, D, ... D	Specifies applicable days of the week for the time period. Respond by inputting a number representing each day for which the schedule is active (where 1=Monday, 2=Tuesday,...7=Sunday). Type an X before the day number to deactivate the schedule period for that day. No more than seven entries are permitted on an input line. Press the return key to leave this schedule unchanged and move to the next prompt. (If not otherwise specified, a schedule period is assumed valid for all days.
ALST	XXXX	Alternative list to be used for the schedule period. Respond with up to four alternative numbers in the order in which they are to be attempted. (These numbers are defined using ALT.)

Prompt	Response	Description
DBK	zzzz	Alternatives for which “drop back busy” is to be active during this period. Respond with four entries of Y (allow) or N (deny) for the alternative evoked by the previous prompt. Responses are applied in sequence.
QUE	zzzz	Specifies alternatives for which queuing to a route is to be allowed during this period. Respond with four entries of Y (allow) or N (deny) for the alternatives evoked by ALST. Responses are applied in sequence. If the response is Y, off-hook queuing must already be configured for calls to be queued on this route

Step 5 - Use LD 93 to assign a NAS routing table to Console Presentation Groups.

Prompt	Response	Description
TYPE	CPG	Console Presentation Group
NTBL	(0)-63	NAS routing table to be used for calls directed to this Attendant Console Group(ACG)/ Console Presentation Group (CPG)

Step 6 - Use LD 16 to allow or deny pre-answer tromboning (allow or deny an incoming call to be directly routed back on the same route).

Note: The Tromboning feature programmed in LD 16 also affects non-NAS calls.

NAS performs tromboning when required regardless of the LD 16 programming. However, if redundant (or tromboned) trunk connections are to drop after the telephone is answered, this prompt must be set to NO across the network where this might occur.

Prompt	Response	Description
TYPE	RDB	Route Data Block
TRMB	(YES),NO	YES = Tromboning allowed (the default). Incoming trunk call on route may be routed back on the same route. Note: Only applies to calls routed using NARS/BARS or CDP. Does not apply to calls redirected by Hunt, Forward All Calls, or Forward No Answer. NO = Tromboning denied. Incoming trunk call on route may not be routed back on same route.

Network Call Party Name Display (NCPND) and Network Name Delivery (NND)

Use this procedure to configure Network Call Party Name Display (NCPND) and Network Name Delivery (NND) on an Option 11 system.

Restrictions and limitations

The Network Call Party Name Display was enhanced to allow names to be transported across the private network. Both the calling and called party names can be sent or received and displayed on the destination set equipped with an alpha-numeric display.

The names are programmed against the DN in LD 95, and the feature allows the sending of names to be controlled on a trunk route basis.

Programming procedure

This procedure contains two major steps:

Step 1: Assign names to DN. Use LD95.

Step 2: Allow Network Call Party Name Display messages on a route basis. Use LD16.

Step 3: Indicate which Network Name Delivery protocol is supported by the remote node/switch on this DCH interface. Use LD 17.

Step 1

Assign names to DN. Use LD95.

Prompt	Response	Description
REQ	NEW, CHG	
TYPE	NAME	Call Party Name Display name entry
CUST	0-31	Customer number
DN	xxxx	DN of eligible type
NAME	aaa...a	CPND name using ASCII characters. The DIG prompt is re-prompted. Enter <CR> to get the DN prompt.

Step 2

Allow Network Call Party Name Display messages on a route basis. Use LD16.

Prompt	Response	Description
REQ	NEW, CHG	
TYPE	RDB	
CUST	0-31	
ISDN	YES	change ISDN option
NCNA	(YES), NO	Network Call Party Name (is) is not allowed on this route. When connected to a DMS set this prompt to NO

Step 3

Indicate which Network Name Delivery protocol is supported by the remote node/switch on this DCH interface. Use LD 17.

Prompt	Response	Description
REQ	CHG	
TYPE	CFN	
ADAN	NEW,CHG	
RCAP	ND1 ND2	Network Name Delivery method 1 Network Name Delivery method 2

Network Call Redirection (NCRD)

Use this procedure to configure Network Call Redirection (NCRD) on an Option 11 system.

Restrictions and limitations

The Network Call Redirection (NCRD) feature has three components:

- Network Call Forward All Calls (**NCFAC**)
- Network Call Forward No Answer (**NCFNA**).
- Network Hunt (**NHNT**)

The various types of call redirection allowed use all of the basic programming already in place in the Meridian 1 database. For example the Call Forward No Answer feature uses the FNAD, FNAT and FNAL programming to determine which destination DN to use (FDN or HUNT DN) based on the type of incoming calls (DID, External or Internal respectively). The called set must have the proper class of service (FNA, HTA, FBA) as well as Hunt DN and FDN to the appropriate destination and a Call Forward key (or dial access from regular set) for call forward all calls (CFW).

ISDN allows call redirection to take place across the private network instead of being limited to the set's home PBX. Presently supported between Meridian 1/SL-1 and to Centrex via TIE lines.

By allowing call redirection across the network, it becomes important to limit the number of steps that a call can take while hopping from switch to switch. This is achieved by a prompt in the customer data block (**RCNT**) which sets the maximum of inter-node hops allowed for NCRD.

Optionally, the reason for call redirection can be displayed using the call party name display feature (CPND in overlay 95) in the same fashion as before.

Basic PRI or ISL administration must be performed before Network Call Redirection is implemented.

Programming procedure

This procedure contains three major steps:

- 1** Set the number of inter-node hops allowed. Use LD15.
- 2** Allow Network Call Redirection messages on a route. Use LD16.
- 3** Display the reason calls are redirected. Use LD95.

Step 1

Set the number of inter-node hops allowed. Use LD 15.

Prompt	Response	Description
REQ	CHG	
TYPE	CDB NET_DATA	Customer data block Release 21 gate opener
CUST	0-31	Customer number
...		
- RCNT	0-(5)	Maximum number of inter-node hops allowed in a network redirection call. This field must be set to greater than 0 for a network redirection to take place
...		

Step 2

Allow Network Call Redirection messages on a route. Use **LD16**.

Prompt	Response	Description
REQ	CHG	
TYPE	RDB	Route data block
CUST	0-31	Customer number
ISDN	yes	Modify ISDN parameters
NCNA	yes	Network Call Name is (is not) allowed. Only required if the name and/or the reason for call redirection is to be displayed. Make sure the Call Party Name Display (CPND) block in overlay 95 is programmed. When connected to a DMS set this prompt to NO.
NCRD	yes	Network Call Redirection. Allows network call redirection reason to be sent (or blocks messages if NCRD =no). Note: Network Call Redirection can occur without answering "yes" to the NCRD prompt. This prompt only controls the sending of Network Call Redirection reason messages for display purposes, not the actual redirection of the call. The message supplied when NCRD = yes provides the information for the CLID display. When NCRD is NO, the call is redirected without the CLID redirection information.
TRO	YES,(NO)	Trunk Optimization

Step 3

Display the reason calls are redirected. Use **LD95**.

Prompt	Response	Description
TYPE	CPND	Call Party Name Display data block
CUST	0-31	Customer number
RESN	yes	Allow display of reason for redirecting calls
CFWD	xxxx, (F)	Display mnemonic for (Network) Call Forward All Calls. Default is "F."
CFNA	xxxx, (N)	Display mnemonic for (Network) Call Forward No Answer display. Default is "N."
HUNT	xxxx, (B)	Display mnemonic for Hunt/Call Forward Busy. Default is "B".
PKUP	xxxx, (P)	Display mnemonic for Call Pickup. Default is "P".
XFER	xxxx, (T)	Display mnemonic for Call Transfer. Default is "T"
AAA	xxxx, (A)	Display mnemonic for Attendant Alternative Answering. Default "A".

Network Intercom (Hot Type D and Hot Type I Enhancements)

Use the following procedure to configure Network Intercom.

Step 1 – Use **Overlay 11** to define Network Intercom Hot Type D and I keys, and Classes of Service.

Prompt	Response	Description
REQ	NEW, CHG, OUT	Configure, change or remove.
TYPE	aaaa	Telephone type where aaaa cannot = M3000.
TN	c u	Terminal Number for the Option 11.
...		
CLS	FICA FICD NAIA NAID	Forward Hot Type I allowed. Forward Hot Type I denied. No Answer indication allowed. No Answer indication denied.
...		
KEY	nn HOT D dd target_num hot_dn R/V/N/(H)	Two-way Hot Line Key. dd = number of digits dialed. target_number = terminating DN (31 digits maximum). Hot_dn = two-way Hot Line DN. Termination mode: R = Ringing V = Voice N = Non-ringing, and H = Hot Line (the default).
KEY	nn HOT I dd target_number (V)/N/R	Hot Line key. dd = number of digits dialed. target_number = terminating DN (31 digits maximum). Termination mode: V = Voice (the default) N = Non-ringing, and R = Ringing.

Step 2 – Use **Overlay 95** to configure the Calling Party Name Display information for Network Intercom.

Prompt	Response	Description
REQ	NEW, CHG	Configure or change.
TYPE	CPND	Calling Party Name Display.
CUST	0-31	Customer Number.
...		
NITC	aaaa (NI)	Non-Hot Line call. Indicates that the Hot Line call terminated as a normal call.

Network Message Services - Message Center (NMS-MC)

Use this procedure to configure *Network Message Services-- Message Center*; (NMS-MC)) on an Option 11 system.

Restrictions and limitations

Basic PRI and / or ISL programming must be in place before implementing Network Message Services. This feature is similar to the existing Message Center feature.

The only difference is the fact that the Call Forward No Answer DN (FDN), Hunt DN and the Message Waiting key (MWK) on telephone sets can now be a Message Center DN (MCDN) located on another Meridian PBX within the private network. This feature supports the Uniform Dialing Plan (UDP), the public numbering plan, and the Coordinated Dialing Plan (CDP). See below for examples of the Message Center DN for these dialing plans.

Call type	Network Message Center DN	Number of Digits
private call using UDP	ACC + LOC + XXXX	8 (9 with 2 digit access code)
private call using CDP	DSC + X..X	10 maximum
public numbering plan	ACC + (1) + NPA + NXX + XXXX ACC + (1) + NXX + XXXX	14 maximum

Make sure that the following prompts are set properly as described in the chapters describing PRI and ISL software programming:

- the Private Network Identifier (PNI) is properly set in Overlay 15 (CDB) and Overlay 16 (RDB).
- the Release ID prompt (RLS) in Overlay 17 (CFN) is properly set (this is the current software release of the far end).

Requires X11 release 15 software or later.

Programming procedure

This procedure contains two major steps:

- 1 Program a Message Center as described in the Option 11 Software Guide (Message types available are: Set, Attendant or ACD).
- 2 Assign Hunt and FDN to Message Center DN. Assign Message Waiting key on Multi-line sets. Use LD10/11.

Prompt	Response	Description
REQ	CHG	
TYPE		appropriate set type
FDN	X..X	Flexible CFNA DN where XX is the MCDN (UDP or CDP format). The FDN value should include AC1/AC2 when applicable. Enter the same number as it would be manually dialed to reach the message center.
HUNT	X..X	change ISDN option
KEY	xx MWK X..X	The Message Waiting key on multi-line set followed by the MCDN. It should include the same digits as FDN and Hunt explained above.

Network Ring Again (NRAG)

Use this procedure to configure Network Ring Again (NRAG); on an Option 11 system.

Restrictions and limitations

NRAG requires that every switch in the network be equipped with either NARS or CDP software. The Network Ring Again feature will operate as part of basic PRI/ISL capability between Meridian 1 and Meridian 1 and DMS-100 via Centrex TIE lines. Besides the administration of NARS or CDP, the only prompt unique to the NRAG feature is the ability to control a duration timer which controls the amount of time between placing a call on ring again and timeout. The value of the duration timer can be changed with the following procedure.

Note: It is important to have the Private Network Identifier (PNI) set properly in order for NRAG to function.

Programming procedure

This procedure contains one major step:

- Change the duration timer on a route basis. Use LD16.

Prompt	Response	Description
REQ	NEW,CHG,	
TYPE	RDB	route data block
CNTL	YES	changes to controls or timers
NRAG	(30)-240	Network Ring Again duration timer —time is in minutes

Network Wide Listed Directory Numbers

LD 15 – Activate Network Wide LDN in CDB.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	CDB LDN_DATA	Customer data block Release 21 gate opener
CUST	0-31	Customer number
...		
- DLDN	YES	Departmental Listed Directory Numbers. Enter YES if no Console Presentation Group (CPG) is configured.
...		
LDN4	xxxx(xxx)	Listed Directory Number 4. If the DN Expansion (DNXP) package is equipped, up to seven digits are allowed; otherwise, only four digits are allowed.
LDA4	xx xx..., ALL	Attendant Consoles associated with LDN4.
LDN5	xxxx(xxx)	Listed Directory Number 5. If the DNXP package is equipped, up to seven digits are allowed; otherwise, only four digits are allowed.
LDA5	xx xx..., ALL	Attendant Consoles associated with LDN5.
OPT	NLDN, (XLDN)	Enable network wide LDN, Exclude LDN.

LD 15 – Add or change LDN keys.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	CDB LDN_DATA	Customer data block Release 21 gate opener
CUST	0-31	Customer number
...		
...		
- ICI	0-19 aaa	Attendant Incoming Indicators.

LD 93 – Add or change LDN keys in CPG.

Prompt	Response	Description
REQ	NEW, CHG	New or change
TYPE	CPGP	Changes affect the Console presentation group parameters.
CUST	x	Customer number
CPG	x	CPG number
LDN4	xxxx(xxx)	Listed Directory Number 4. If the DNXP package is equipped, up to seven digits are allowed; otherwise only four can be entered.
LDN5	xxxx(xxx)	Listed Directory Number 5. If the DNXP package is equipped, up to seven digits are allowed; otherwise only four can be entered.
...		
ICI	x LD4	x is the key number for listed DN 4.
ICI	x LD5	x is the key number for listed DN 5

NPI and TON in CDR Tickets

LD 17 – Configure the NPI and TON fields.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	PARM	System parameters.
...		
FCDR	NEW	New Format CDR. OLD = Old CDR format (default).
...		
CLID	YES	TON and NPI fields, in addition to CLID, are included.
...		

Note 1: For the NPI and TON in CDR Tickets feature, existing CDR implementation procedures must be performed.

Note 2: CLID must be configured for the NPI and TON in CDR Tickets feature. Refer to the “Calling Line Identification” and “ISDN Calling Line Identification Enhancements” feature modules in this document.

Remote Virtual Queuing (RVQ)

Feature implementation

All nodes supporting RVQ must have it enabled. Perform these procedures to configure RVQ on the originating node, and to check for RVQ on the tandem and terminating nodes.

LD 86 — Configure the originating node for RVQ.

Prompt	Response	Description
REQ	CHG	Change
CUST	nn	Customer number
FEAT	RLB	Route List data block
RLI	nn	Route List Index
ENTRY	nn	Route List entry number
ROUT	nnn	Route number
...		
IDBB	(DBD) DBI DBA	Enter DBD (Drop Back Busy Disabled). This will disable Drop Back Busy, and enable Remote Virtual Queuing for the customer. DBI = Drop Back if Initial set is busy. DBA = Drop Back if all routes are busy.
...		
CBQ	YES	Allow Call Back Queuing.
...		

LD 87 — Configure originating node for CBQ.

Prompt	Response	Description
REQ	CHG	Change
CUST	nn	Customer number
FEAT	NCTL	Network Control
...		
SCBQ	YES	Allow system Call Back queueing for the customer.
NCOS	nn	Network Class of Service number. The originating telephone must have the same value.
...		
CBQ	YES, (NO)	Call Back Queueing allowed (not allowed) for this NCOS
RETT	2–(10)–30	Remote Virtual Queueing Retry Timer (Time between searches, in seconds).
RETC	4–(5)–16	Remote Virtual Queueing Retry Counter (Number of times RVQ searches the initial set before moving on to the extended set).

LD 86— Configure the outgoing routes of the originating nodes for CBQ (at least one entry of the Initial set of the outgoing route has to allow CBQ).

Prompt	Response	Description
REQ	CHG	Change
CUST	nn	Customer number
FEAT	RLB	Route List data block
RLI	nn	Route List Index
ENTRY	nn	Route List entry number
- ROUT	0-511	Route number
...		
- CBQ	YES	Allow Call Back Queuing.
...		
ENTRY	<cr>	
ISSET	nn	Size of Initial set

LD 16 — Allow CBQ for the incoming non-ISDN routes on the originating nodes (for RVQ at a conventional Main operation).

Prompt	Response	Description
REQ	CHG	Change
TYPE	RDB	Route data block
CUST	0-511	Customer number
ROUT	nnn	Route number
...		
CBQ	YES	Allow Call Back Queuing.
...		

Trunk Anti-Tromboning

Feature implementation

LD 17 — Configure TAT functionality to be performed at the far-end switch.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	ADAN	Type of change.
- ADAN		Action Device and Number.
	NEW DCH x	Add D-channel x.
	CHG DCH x	Change D-channel x.
- CTYP	MSDL DCHI	The NTBK51BA D-Channel Daughterboard with PRA. The NTBK51BA D-Channel Daughterboard with ISL/VNS.
- CDNO	1-10	The card number for the Downloadable D-channel.
- PORT	1	Port number on the NTBK51BA D-Channel Daughterboard. Only port 1 is valid for the Option 11.
...		
- IFC	SL1 S100 D100 D250	Interface type for D-channel. Either SL1, S100, D100, or D250 may be entered. Currently, SL1 and D250 are the only interfaces supported by TAT.
...		
- RLS	xx	Release ID of the switch at the far end of the D-channel. Release 21 or higher must be entered.
- RCAP	TAT	Remote Capabilities. TAT must be entered to enable Trunk Anti-Tromboning.

Virtual Network Services

Feature implementation

LD 17 – Configure Virtual Network Services.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	ADAN aaa xx	Release 19 gate opener. DCH 0 - 15
...		
- USR	VNS SHAV	To define a D-channel used for Virtual Network Services (or ISLD). To define a D-channel shared between PRI and VNS (and ISLD).
- VNSM	0-100	Define the maximum number of VNS channels over the D-channel.
- VNSC	0-31	Virtual Network Services Customer number.
- VNSP	0-32700	Private Network Identifier (PNI) of the far end customer.
- VNCA	YES	Network Call Party Name Display is available over this D-channel for VNS.
- VCRD	YES	Network Call Redirection is available over this D-channel for VNS.
- VTRO	YES	Trunk Route Optimization before answer is available over this D-channel for VNS. This prompt is optional and is not a prerequisite for VNS.

The following steps describe how to:

- Add or create a new single VDN or a block of contiguous VDNs
- Remove a single VDN or a block of contiguous VDNs
- Disable or enable a block of VDNs, or print VNS information for a customer

LD 79 - Add or create a new single VDN or a block of contiguous VDNs.

Prompt	Response	Description
REQ	NEW	Add or create a new single VDN or a block of contiguous VDNs. Note: The CHG command is not supported; you must use the NEW command to enter information.
TYPE	VNS	Virtual Network Services.
CUST	0-31	Customer number.
VNDN	xx...x 1-4000 xx...x <CR>	Individual VDN to be added. 1-4000 = number of contiguous VDN to be added xx...x = first VDN to be added. You may add another single VDN or a block of contiguous VDNs by entering <CR> after the VNDN entry. VNDN is prompted until <CR> is entered. In this case, the REQ prompt will appear again. Note: For the above entries, the VDNs must be part of the customer's numbering plan.

LD 79 - Remove a single VDN or a block of contiguous VDNs, or remove all existing VDN data blocks.

Prompt	Response	Description
REQ	OUT	Remove a single VDN or a block of contiguous VDNs, or remove all existing VDN data blocks. Note: You cannot remove only certain VDNs from a block; you have to remove the entire block.
TYPE	VNS	Virtual Network Services.
CUST	0-31	Customer number. At least one D-Channel must be configured with USR = VNS or USR = SHAV and having VNS = customer number.
VNDN	XALLVDNS xx...x <CR>	Remove all VNS data blocks. Remove an individual VDN, or the first VDN of a block of contiguous VDNs. You may remove another single VDN, or a block of contiguous VDNs, by entering <CR> after the VNDN entry. VNDN is prompted until <CR> is entered. In this case, the REQ prompt will appear again. If XALLVDNS is entered, the message REMOVE ALL VDN BLOCKS? is then output, followed by the CONF prompt.
CONF	YES	To confirm the removal of all VDN blocks.

LD 79 – Disable or enable single VDN, or a block of contiguous VDNs.

Prompt	Response	Description
REQ	DIS ENL	Disable a single VDN or a block of contiguous VDNs Enable a single VDN or a block of contiguous VDNs
TYPE	VNS	Virtual Network Services.
CUST	0-31	Customer number. At least one D-Channel must be configured with USR = VNS or USR = SHAV and having VNS = customer number.
VNDN	xx....x <CR>	Individual VDN, or first VDN of a block of contiguous VDNs to be disabled or enabled. You may enable or disable another single VDN, or a block of contiguous VDNs, by entering <CR> after the VNDN entry. VNDN is prompted until <CR> is entered. In this case, the REQ prompt will appear again.

LD 79– Print VNS information for a customer.

The information is output after the customer number is entered in response to the CUST prompt.

Prompt	Response	Description
REQ	PRT	Print VDN information.
TYPE	VNS	Virtual Network Services.
CUST	0-31	Customer number. At least one D-Channel must be configured with USR = VNS or USR = SHAV and having VNS = customer number. The VNS information is output for the customer. For a range of VDNs, the first VDN is displayed, followed by “—” and the last VDN of the block. On the same line, the number of VDNs in the block is displayed in brackets. For a single VDN, the VDN is displayed followed by “(1)”. If a block is disabled, the above indication is followed by the number of VNS calls still using a VDN in the block. These calls have to be cleared before the VDN block can be removed. At the end, the total number of VDNs configured for the customer is output. A sample output could be: <pre>7676 (1) 8100-8199 (100) TOTAL NUMBER OF VDN FOR CUST 2: 101</pre> If the VDN block 8100-8199, containing 100 VDNs, is disabled, the output would be: <pre>7676 (1) 8100-8199 (100) *DISABLED - VDN USED: 2* TOTAL NUMBER OF VDN FOR CUST 2: 101</pre> In this case, the VDN block is disabled and two VNS calls are still using two VDNs. These two calls must first be cleared before the VDN block 8100-8199 can be removed.

LD 86 – Assign D-channel number and VNS digit manipulation index to be used when signaling on the Bearer trunk and on the D-channel.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
...		
ENTR	0-63	Entry number for NARS/BARS Route List.
ROUT	0-511	The number of the route to be associated with the VNS Bearer channel.
VNS	YES	Virtual Network Services.
VDCH	0-15	The D-channel used for these VNS calls (must be configured in LD 17).
VDMI	xxx	The Digit Manipulation Table to be used on the VNS D-channel.
	(0)	No digit manipulation required.
	1-31	For Coordinated Dialing Plan feature.
	1-255	For NARS/BARS.
VTRK	1-(20)-100	Number of VNS trunks allowed on the route.
DMI	xxx	The Digit Manipulation table to be used on the VNS Bearer.
	(0)	No digit manipulation required.
	1-31	For Coordinated Dialing Plan feature.
	1-255	For NARS/BARS.

LD 16 – The following TIMR, TIMR, and VRAT prompts have been added to this overlay:

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
TYPE	RDB	Route Data Block.
CUST	0-31	Customer number.
ROUT	0-511	The number of the route to be associated with the incoming VNS Bearer channel.
CNTL	YES	Change control of timers.
- TIMR	VSS (0) 1 2-1023	VNS Set Speechpath Timer 0 = Do not answer the bearer channel until the terminating party answers. 1 = Answer the Bearer channel immediately on arrival. 2-1023 = Answer the Bearer channel after specified seconds (rounded down to two-second multiples) if the terminating party has not already answered.
- TIMR	VGD 0-(6)-31	VNS Guard Timer The time allowed for the Bearer trunk call to disconnect, in seconds. This is a guard timer on the associated VNS DN.
...		
VRAT	(NO) YES	VNS Return Attendant Tones Option Do (not) answer an attendant extended call over VNS immediately on the incoming Bearer trunk.

Virtual Network Services Virtual Directory Number Expansion

Feature implementation

The following steps describe how to:

- Add or create a new single VDN or a block of contiguous VDNs;
- Remove a single VDN or a block of contiguous VDNs;
- Disable or enable a block of VDNs, or print VNS information for a customer.

LD 79 - Add or create a new single VDN or a block of contiguous VDNs.

Prompt	Response	Description
REQ	NEW	Add, or create a new single VDN or a block of contiguous VDNs. Note: The CHG command is not supported; you must use the NEW command to enter information.
TYPE	VNS	Virtual Network Services.
CUST	0-99 0-31	Customer Number for Options 51C, 61C, 81, 81C. Customer Number for Option 11C. At least one D-Channel must be configured with USR = VNS or USR=SHAV and having VNS = customer number.
VNDN	xx...x 1-4000 xx...x <cr>	Individual VDN to be added. 1-4000 = number of contiguous VDN to be added xx...x = first VDN to be added. You may add another single VDN or a block of contiguous VDNs by entering <cr> after the VNDN entry (VNDN is prompted until <cr> is entered.) In this case, the REQ prompt will appear again. Note: For the above entries, the VDNs must be part of the customer's numbering plan.

LD 79 - Remove a single VDN or a block of contiguous VDNs, or remove all existing VDN data blocks.

Prompt	Response	Description
REQ	OUT	Remove a single VDN or a block of contiguous VDNs, or remove all existing VDN data blocks. Note: You cannot remove only certain VDNs from a block; you must remove the entire block.
TYPE	VNS	Virtual Network Services.
CUST	0-99 0-31	Customer Number for Options 51C, 61C, 81, 81C. Customer Number for Option 11C. At least one D-Channel must be configured with USR = VNS or USR = SHAV and having VNS = customer number.
VNDN	XALLVDNS xx...x <cr>	Remove all VNS data blocks. Remove an individual VDN, or the first VDN of a block of contiguous VDNs. You may remove another single VDN, or a block of contiguous VDNs, by entering <cr> after the VNDN entry (VNDN is prompted until <cr> is entered.) In this case, the REQ prompt will appear again. If XALLVDNS is entered, the message REMOVE ALL VDN BLOCKS? is then output, followed by the CONF prompt.
CONF	YES	To confirm the removal of all VDN blocks.

LD 79 – Disable or enable single VDN, or a block of contiguous VDNs.

Prompt	Response	Description
REQ	DIS ENL	DIS = disable a single VDN or a block of contiguous VDNs ENL = enable a single VDN or a block of contiguous VDNs
TYPE	VNS	Virtual Network Services.
CUST	0-31	Customer Number for Option 11C. At least one D-Channel must be configured with USR = VNS or USR = SHAV and having VNS = customer number.
VNDN	xx....x <cr>	Individual VDN, or first VDN of a block of contiguous VDNs to be disabled or enabled. You may enable or disable another single VDN or a block of contiguous VDNs, by entering <cr> after the VNDN entry (VNDN is prompted until <cr> is entered.) In this case, the REQ prompt will appear again.

LD 79– Print VNS information for a customer.

The information is output after the customer number is entered in response to the CUST prompt.

Prompt	Response	Description
REQ	PRT	PRT = print VDN information.
TYPE	VNS	Virtual Network Services.
CUST	0-31	Customer Number for Option 11C. At least one D-Channel must be configured with USR = VNS or USR = SHAV and having VNS = customer number. The VNS information is output for the customer. For a range of VDNs, the first VDN is displayed, followed by “—” and the last VDN of the block. On the same line, the number of VDNs in the block is displayed in brackets. For a single VDN, the VDN is displayed followed by “(1)”. If a block is disabled, the above indication is followed by the number of VNS calls still using a VDN in the block. These calls have to be cleared before the VDN block can be removed. At the end, the total number of VDNs configured for the customer is output. A sample output could be: <pre>7676 (1) 8100-8199 (100) TOTAL NUMBER OF VDN FOR CUST 2: 101</pre> If the VDN block 8100-8199, containing 100 VDNs, is disabled, the output would be: <pre>7676 (1) 8100-8199 (100) *DISABLED - VDN USED: 2* TOTAL NUMBER OF VDN FOR CUST 2: 101</pre> In this case, the VDN block is disabled and two VNS calls are still using two VDNs. These two calls must first be cleared before the VDN block 8100-8199 can be removed.

LD 17 – Define the maximum number of VNS channels supported by a D-Channel.

Prompt	Response	Description
REQ	CHG, END	Change, or exit LD 17.
TYPE	ADAN	Action Device and Number.
- ADAN	CHG DCH 0-63 CHG DCH 0-15	The D-Channel number for Options 51C, 61C, 81, 81C. D-Channel number for Option 11C.
...		
- USR	VNS, SHAV	VNS = dedicated VNS D-Channel SHAV = shared VNS D-Channel
...		
- - VNSM	1-300	Maximum number of VNS channels supported by the D-Channel. Note: This is the potential VNS capability for the D-Channel and is not associated with other restrictions placed on VNS capability, such as the number of VDNs.

LD 86 – Define the maximum number of VNS trunks allowed on the route list entry.

Prompt	Response	Description
REQ	NEW, CHG	New, or change.
CUST	0-31	Customer Number.
FEAT	RLB	Route list data block feature.
RLI	0-MXRL	The Route List Index to be associated with the VNS Bearer Channel.
ENTR	0-63	The entry within the Route List Index to be associated with the VNS Bearer Channel.
ROUT	0-511	The number of the Route to be associated with the VNS Bearer Channel.
VNS	YES	Virtual Network Services.
...		
VTRK	1-(20)-254	Number of VNS Trunks allowed on the route.